NEW APPLICATION

0000011894

ORIGINAL

BEFORE THE ARIZONA CORPORATON COMMISSION

AZ CORP COMMISSION

FEB 26 3 05 PM '99

DOCUMENT CONTROL

JAMES M. IRVIN
Chairman
TONY WEST
Commissioner
CARL J. KUNASEK
Commissioner

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN.	DOCKET NO. T-01051B-99-0105 **APPLICATION** Arizona Corporation Commission DOCKETED FEB 26 1999 DOCKETED BY sd

Pursuant to the Commission's order dated May 26, 1998 in Docket No. T-01051B-97-0689, U S WEST Communications, Inc. ("U S WEST"), a Colorado corporation, hereby files for a determination of U S WEST's earnings and the fair value of its investment and requests that a just and reasonable rate of return be established and that rate schedules be approved to provide such rate of return. So that the emerging competitive marketplace is properly taken into account, U S WEST further requests the Commission to create competitive zones in which U S WEST will have greater market freedom and to declare that all data services provided by U S WEST be deregulated. In support of its Application, U S WEST alleges as follows:

1.

U S WEST is a corporation duly organized and existing under and by virtue of the laws of the State of Colorado. U S WEST is authorized to engage in and is now engaged in the conduct of a general communications business within the State of Arizona and elsewhere.

2.

U S WEST's present place of business in Arizona is 3033 North Third Street, Phoenix, Arizona 85012.

3.

This Application is made pursuant to the provisions of A.R.S. §§ 40-250 and 40-367 and Rule R14-2-103, A.C.R.R.

4.

The Arizona Corporation Commission ("Commission") last considered U S WEST's rates in Docket No. E-1051-93-183 which resulted in Commission Decision No. 58927. Since then, the competitive landscape in Arizona has changed dramatically. In June, 1995, the Commission adopted new rules allowing other carriers to compete with U S WEST for local service. In February, 1996, Congress passed the Telecommunications Act of 1996 which opened U S WEST's markets even further to competition. Today, more than a dozen telecommunications providers have entered into interconnection agreements for the provision of local service and the markets for toll service and for high capacity services have become extremely competitive.

5.

U S WEST has a revenue deficiency of $225.9 million in Arizona on its original cost rate base and a deficiency of $273.3 million on its fair value rate base. Despite efforts by U S WEST to increase revenues through marketing efforts and to reduce costs through efficiencies from new technologies, its earnings from Arizona operations are extremely low as evidenced by the fact that its earned return on net assets for the test period was 7.69%. The main reasons for U S WEST's poor earnings are the continuing high level of construction capital invested by the company in Arizona to provide customer service, the opening of Arizona markets to competition, the low rates which U S WEST is authorized to receive for its services and the impact of accounting changes required by Statement of Financial Accounting Standards No. 106. U S WEST is seeking rate relief in this proceeding in order to improve its earnings to acceptable levels and meet the increasing service and technological demands of its customers.

6.

A modern state-of-the-art telecommunications network is vital to the economic growth of Arizona. Such a network attracts and retains businesses and jobs both in urban and rural areas. Because of its history of poor earnings in Arizona, U S WEST is finding it more difficult to attract capital to fund the construction necessary to build and maintain a technologically advanced network. Therefore, it is imperative that the Company be granted the opportunity to earn a just and reasonable return on its Arizona operations so it can attract an appropriate level of investment capital. The need for investment capital is particularly acute today given the tremendous growth that has occurred in Arizona since the last rate case. U S WEST has added more than 450,000 access lines since January 1, 1996.

7.

The revenue requirement proposed by U S WEST in this proceeding is based upon the most recent test period feasible, the twelve months from July, 1997 through June, 1998. Actual test year operating results have been appropriately adjusted to provide the Commission with an accurate representation of the Company's financial condition. In order to simplify and focus the discussion on the more critical financial issues facing the Company, U S WEST has made certain Commission adjustments to its operating results based on the premise that the Commission has heard arguments on these adjustments in past rate cases and would presumably, without new arguments being advanced, reach the same conclusions. The Commission adjustments U S WEST has made include adjustments for merger costs, non-employee concessions, customer deposits, cash working capital, Bellcore, and interest synchronization. The Commission adjustments incorporated by U S WEST in this filing are applicable for this case only and are expressly conditioned on the Commission approving rates and charges consistent with the Company's request. U S WEST reserves its right to challenge these adjustments in subsequent regulatory or legal proceedings in Arizona or elsewhere. After making these Commission adjustments, the additional annual revenue required to allow U S WEST to earn a just and reasonable return on its Arizona investment is $225.9 million.

8.

In this proceeding, U S WEST is requesting that it be allowed to recover only $70.9 million of its $225.9 million revenue deficiency through specific tariffed rate increases. U S WEST's rate design proposal has several other salient features. First, certain wire centers would be designated as competitive zones once customers within the zone gained access to a competitive alternative, whether through facilities based competition, resale or unbundled elements. Within these zones, U S WEST would be free to price within bands constrained by a floor and a maximum price. Second, U S WEST proposes that all new services be classified as competitive immediately. U S WEST has no meaningful advantage over its competitors for such services and should be allowed to compete on a level playing field with its competitors. Finally, U S WEST proposes that data services be deregulated entirely. Specifically, U S WEST requests that the Commission deregulate the following digital high capacity services: Frame Relay Service, ATM Cell Relay Service, LAN Switching Services, Transparent LAN Service, Megabit Services, and DS1 and DS3 transport services (including Switched Access transport). The market for high capacity data services is already extremely competitive such that regulation is not essential or integral to the provision of public telephone service. Nor are the rates, terms or conditions for the provision of high capacity data services a matter of public concern.

9.

The emergence of competition in Arizona and its accelerating growth has made regulatory freedom a must for U S WEST. If U S WEST is not permitted to compete for the low cost, high profit business in Arizona, it will increasingly lose market share to competitors who do not yet share U S WEST's carrier of last resort obligation. Lack of pricing flexibility will ultimately work to the detriment of captive customers who do not, and are unlikely to have, competitive alternatives. These customers will ultimately pay rates to cover a larger share of the fixed costs of U S WEST's networks as low cost, high profit customers switch to competing providers. Thus, providing U S WEST with the flexibility to compete for customers with competitive alternatives will ultimately work to the benefit of all rate payers.

10.

In connection with this Application, U S WEST has filed the schedules required by Rule R-14-2-103, testimony, updated exchange maps, and exhibits which include a schedule of specific changes in its rates, tolls, and charges to recover $70.9 million of its $225.9 million revenue deficiency. In addition, U S WEST adopts as its testimony in this proceeding, the testimony it filed in Docket No. T-01051B-97-0689 to support its request for new depreciation rates. U S WEST reserves the right to supplement its testimony in this proceeding as necessary depending upon the Commission's decision in Docket No. T-01051B-97-0689 regarding the proposed settlement submitted to the Commission for its approval.

WHEREFORE, U S WEST hereby requests that the Commission determine the earnings of the Company and the fair value of the Company's investments for ratemaking purposes, that the

Commission fix a just and reasonable rate of return thereon and that the Commission approve U S WEST's proposed rate schedules. U S WEST further requests that all data services be deregulated and that its competitive zone proposal be adopted.

Respectfully submitted this 8th day of January, 1999.

U S WEST, INC.
Law Department
Thomas Dethlefs

and

FENNEMORE CRAIG, P.C.

By [signature]

Timothy Berg
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3003 North Central, Suite 2600
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Attorneys for U S WEST
Communications, Inc.

BEFORE THE ARIZONA CORPORATON COMMISSION

JAMES M. IRVIN
Chairman
TONY WEST
Commissioner
CARL J. KUNASEK
Commissioner

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN.	DOCKET NO. T-01051B-99-______ **CERTIFICATE OF FILING AND MAILING**

The undersigned, as attorney for U S WEST Communications, Inc., certifies that an original and ten copies of U S WEST's Application and related exhibits were filed on this date with the Arizona Corporation Commission Docket Control. Copies of the Application and related exhibits were hand delivered on this date to:

Paul Bullis, Chief Counsel
Legal Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Ray Williamson, Director
Utilities Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

. . . .

Dated this 8th day of January, 1999.

U S WEST, INC.
Law Department
Thomas Dethlefs

and

FENNEMORE CRAIG, P.C.

By ______________________
Timothy Berg
Theresa Dwyer
3003 North Central, Suite 2600
Phoenix, Arizona 85012
Attorneys for U S WEST Communications, Inc.

ARIZONA CORPORATION COMMISSION
U S WEST COMMUNICATIONS
R-14 INDEX

SCHEDULE NO	TITLE	EXPLANATION
A . Summary Schedules		
A-1	Computation of Revenue Requirement	Computation of revenue requirement and spread of increase by customer classification.
A-2	Summary Results of Operations	Comparative operating results for the test year and prior two fiscal years with projected year(s).
A-3	Summary of Capital Structure	Comparative capital structures for the three preceeding historical years, test year and projected year.
A-4	Construction and Gross Plant -in-Service	Construction Expenditures, plant placed in service and gross plant for the test year and two preceeding fiscal years compared with the projected year.
A-5	Summary Changes in Financial Posistion	Sources and application of funds in summary format.
B. Rate Base Schedules		
B-1	Summary of Original Cost and RCND	Original cost and RCND Rate Base elements.
B-2	Original Cost Rate Base Pro Forma Adjustments	Pro forma adjustments to gross plant in service and accumulated depreciation for the original cost rate base.
B-3	RCND Rate Base Pro Forma Adjustments	Pro forma adjustments to gross plant in service and accum. Depr. RCND rate base.

B-4	RCND by Major Plant Account	Determination of Reproduction Cost New less depreciation at end of test period.
B-5	Computation for Cash Working Capital	Cash Working Capital

C. Test Year Income Statement

C-1	Adjusted Test Year Income Statement	Statement of Income for the test year including pro forma adjustments.
C-2	Income Statement Pro Forma Adjustments	Itemization of pro forma adjustments to the test year.
C-3	Computation of Revenue Conversion`Factor	Development of Revenue Multiplier showing incremental taxes on gross revenue.

D. Cost of Capital

D-1	Summary Cost of Capital	Elements of Capital Structure and the related costs.
D-2	Cost of Long and Short-Term Debt	Computation of cost of long and short term debt.
D-3	Cost of Preferred Stock	N/A
D-4	Cost of Common Equity	Summary of conclusions on the required rate of return on common equity as of the end of test year and projected year (and/or exhibits in support thereof).

E. Financial Statements and Statistical Schedules

E-1	Comparative Balance Sheet	Comparison of balance sheets at end of test year and two preceeding fiscal years.

E-2	Comparative Income Statements	Comparison of income statements for the test year and two preceeding fiscal years.
E-3	Comparative Statement of Changes in Financial Position	Comparison of changes in financial position for the test year and the prreceeding two fiscal years.
E-4	Statement of Changes in Stockholder Equity	Changes in stockholder equity for the test year and the preceeding two fiscal years.
E-5	Detail of Utility Plant	Utility plant balance by detailed account number at the end of the test year and the end of the prior fiscal year.
E-6	Comparative Departmental Operating Income Statement	Comparison of departmental statements of operating income for the test year and the preceeding two fiscal years.
E-7	Operating Statistics	Comparison of key operating statistics for the test year and the preceeding two fiscal years.
E-8	Taxes Charged to Operations	Significant taxes charged to operations for the test year and the preceeding two fiscal years.
E-9	Notes to Financial Statements	Disclosure of important facts pertaining to the understanding of the financial statements.

F. Projections and Forcasts

F-1	Projected Income Statement - Present and Proposed Rates	Comparison of projected year with actual test year results at present and proposed rates.

F-2	Projected Changes in Financial Position -Present and Proposed Rates	Comparison of projected change in financial positon with the test year at present and proposed rates.
F-3	Projected Construction Requirements	Comparison of projected construction requirements with the test year.
F-4	Assumptions Used in Developing Projections	Important assumptions used in preparing projections.

Index of Rate Schedules

Rate Schedules	Title	Explanation
G1-7	Not applicable to telecommunication services	See cost filing material included with the testimony of Jerry Thompson
H-1	Summary of Revenues by Customer Classification - Present and Proposed Rates	A comparison of revenues by customer classification or other classification of revenues for the test year, at present and proposed rates.
H-2	Analysis of Revenues by Detailed Class of Service - Present and Proposed Rates	A comparison of revenues by class of service and by rate schedule for the test year, at present and proposed rates.
H-3	Changes in Representative Rate Schedules	A comparison of present and proposed rate schedules or representative rate schedules.
H-4	Typical Bill Analysis	A comparison of typical customer bills at present and proposed rates.
H-5	Bill Count	Shows billing activity for each rate schedule.

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-1, Page 1 of 1
Title: Computation of Increase in Operating Revenue

Date: January 8, 1999

	A	B
	Test Year Ended June 30, 1998	
	Original Cost	Fair Value
1 Adjusted Rate Base (a)	1,474,717	1,737,397
2 Adjusted Net Operating Income (b)	73,596	73,596
3 Current Rate of Return (L.2/L.1)	4.99%	4.24%
4 Required Operating Income (L.1*L5)	158,404	186,619
5 Required Rate of Return (c)	10.74%	10.74%
6 Operating Income Deficiency (L.4-L.2)	84,808	113,023
7 Gross Revenue Conversion Factor (d)	1.6808	1.6808
8 Increase in Gross Revenue Requirements (L.6*L7)	$142,542	$189,966
9 Three Year Revenue Requirement	$ 83,336	$ 83,336
10 Total Increase in Revenue Requirement (L8+L9)	$ 225,878	$ 273,301

Customer Classification	Projected Revenue Increase due to Rates	Percent Increase
9 Exchange and Network Services	25,463 (e)	3.36%
10 Competitive Services	44,047	46.61%
11 Services Catalog/Other Svcs.	0	0.00%
12 Private Line Transport Services	7,099	19.02%
13 Access Services	(5,723)	-2.54%
14 Contribution Maintenance Service	0	0.00%
15 Advanced Communications Services	0	0.00%
16 Special Assembly	0	0.00%
17 Total Gross Revenues (Lines 1-8)	70,887	6.19%

Supporting Schedules:
(a) B-1
(b) C-1
(c) D-1
(d) C-3
(e) H-1

Recap Schedules:
None

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-2, Page 1 of 2
Title: Summary Results of Operations

Date: January 8, 1999

	A	B	C	D		E	F
	Prior Years			Test Year Ended June 30, 1998	3 Yr.	Projected Year Ended YTD 09/98 Annualized	
				Pro Forma	Rev. Rqmt.	Present	Proposed
	1996	1997	Actual	Adjusted	Adjustments	Rates	Rates
Description	(a)	(a)	(a)	(b)		(c)	(c)
1 Gross Revenues	1,007,752	1,079,972	1,123,866	1,110,724	0	1,145,056	1,215,943
2 Uncollectible Revenue, Operating Expenses and Taxes	940,994	992,175	1,013,247	1,037,128	55,059	1,013,096	1,117,221
3 Operating Income (L.1-2)	66,758	87,797	110,620	73,596	(55,059)	131,960	98,722
4 Other Income and Deductions	(19,015)	(7,166)	6,168	7,215	0	20,228	20,228
5 Interest Expense	46,726	43,419	40,791	45,716	0	40,071	40,071
6 Net Income (L.3+4-5)	$39,047	$51,544	$63,661	$20,665	($55,059)	$71,661	$38,422
7 Earned per Average Common Share	N/A	N/A	N/A	N/A		N/A	N/A
8 Dividends per Common Share	N/A	N/A	N/A	N/A		N/A	N/A
9 Payout ratio	100.00%					N/A	N/A
10 Return on Average Invested Capital	6.02%	7.15%	8.05%	5.12%	-4.25%	8.62%	6.05%
11 Return on Year End Capital	4.82%	5.50%	5.87%	3.73%	-3.10%	6.28%	4.41%
12 Return on Average Common Equity	5.43%	6.95%	8.57%	2.78%	-7.40%	9.63%	5.16%
13 Return on Year End Common Equity	3.90%	5.04%	6.11%	1.98%	-5.28%	6.88%	3.69%
14 Times Bond Interest Earned (Before Federal Income Taxes)	2.03	2.80	3.58	2.36	-	4.01	3.18
15 Times Total Interest Earned (After Income Taxes)	1.84	2.19	2.56	1.45	-	2.79	1.96

Supporting Schedules:
(a) E-2
(b) C-1
(c) F-1

Note: (N/A) Not Available

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-2, Page 2 of 2
Title: Summary Results of Operations

Date: January 8, 1999

Description	A Prior Years 1996 (a)	B 1997 (a)	C Actual (a)	D Test Year Ended June 30, 1998 Pro Forma Adjusted (b)	3 Yr. Rev. Rqmt. Adjustments (b)	E Projected Year Ended YTD 09/98 Annualized Present Rates (c)	F Proposed Rates (c)
1 Net Income	39,047	51,544	63,661	20,665	(55,059)	71,661	38,422
2 Income for JDIC (Job Development Investment Credit)	1,621	1,773	1,900	1,037	(1,133)	2,043	1,675
3 Income for Equity (L.1-2)	$37,427	$49,771	$61,762	$19,628	($53,926)	$69,617	$36,748
4 Regulatory Return on End of Period Equity Base	3.74%	4.87%	5.93%	1.88%	-5.17%	6.68%	3.53%
5 Return on Fair Value of Property Rate Base	N/A	N/A	6.37%	4.24%	-3.17%	N/A	N/A

Supporting Schedules:

Note: (N/A) Not Available

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U S WEST COMMUNICATIONS, INC.
ARIZONA TOTAL STATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-3, Page 1 of 1
Title: Summary of Capital Structure

Date: January 8, 1999

Description	A Prior Years At Dec. 31, 1996	B At Dec. 31, 1997	C Test Year At June 30, 1998	D Projected Year Dec. 31, 1998
1 Short Term Debt	109,528	62,067	106,417	100,389
2 Long Term Debt	669,400	641,918	629,676	627,222
3 Total Debt (L.1+2)	$778,928	$703,986	$736,093	$727,611
4 Common Equity	1,000,602	1,021,837	1,042,160	1,036,684
5 Unamortized Job Development (b) Investment Tax Credits	26,792	23,414	22,299	21,660
6 Total Capital (L.3 thru 5)	$1,806,321	$1,749,236	$1,800,552	$1,785,954
Capitalization Ratios				
7 Short Term Debt	6.06%	3.55%	5.91%	5.62%
8 Long Term Debt	37.06%	36.70%	34.97%	35.12%
9 Total Debt (L.7+L.8)	43.12%	40.25%	40.88%	40.74%
10 Common Equity	55.39%	58.42%	57.88%	58.05%
11 Unamortized Job Development Investment Tax Credits	1.48%	1.34%	1.24%	1.21%
12 Weighted Cost of Short Term Debt *	5.84%	6.06%	6.15%	6.10%
13 Weighted Cost of Long Term Debt *	7.58%	7.71%	7.74%	7.75%
14 Cost of Equity			13.00%	13.00%

* Based upon total state capital allocation.

Supporting Schedules:
D-1
E-1(b)

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-4, Page 1 of 1
Title: Construction Expenditures and Utility Plant in Service

Date: January 8, 1999

	Year	A Total State Construction Expenditures (a)	B Intrastate Net Plant Placed in Service	C Gross Utility Plant in Service (b)
1	1996	408,258	1,844,402	3,200,989
2	1997	461,096	1,854,690	3,299,806
3	Test Year Ended June 30, 1998	481,364	1,852,413	3,390,874
4	Projected Year 1998	368,248	1,842,318	3,446,757

Supporting Schedules:
(a) F-3
(b) E-1 & E-5

Recap Schedules:
None

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule A-5, Page 1 of 1
Title: Summary Statement of Cash Flows

Date: January 8, 1999

	A	B	C	D	E
	End of Year At Dec. 31, 1996	End of Year At Dec. 31, 1997	End of Test Year At June 30, 1998	Present Rates 09/98 Annualized	Projected Year Proposed Rates
OPERATING ACTIVITIES					
1. Net Operating Revenues	77,300	119,800	159,800	191,900	136,600
Adjustments to Net Operating Income:					
2. Depreciation & Amortization	236,200	246,600	244,800	243,700	349,000
3. Current Income Taxes	(24,800)	(66,200)	(70,200)	(72,500)	(92,500)
4. Cash provided by Operating Activities (L1.L:	288,700	300,200	334,400	363,100	393,100
INVESTING ACTIVITIES					
5. Net Construction Expenditures	(296,900)	(334,700)	(349,500)	(268,800)	(268,800)
6. Cash(used for) investing activities (L4)	(296,900)	(334,700)	(349,500)	(268,800)	(268,800)
FINANCING ACTIVITIES					
7. Dividends Paid	(87,500)	(97,800)	(102,700)	(116,400)	(116,400)
8. Net Outside Financing	2,400	(43,800)	28,100	44,500	44,500
9. Interest	(46,700)	(43,400)	(40,800)	(40,100)	(40,100)
10. Net Cash Flow (L4+L6+L7+L8+L9)	(140,000)	(219,500)	(130,500)	(17,700)	12,300

Supporting Schedules:
(a) E-3
(b) F-2

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-1, Page 1 of 1
Title: Summary of Original Cost and Fair Value Rate Base Elements

Date: January 8, 1999

		A	B
		As of June 30, 1998	
		Original Cost Rate Base* (a)	Fair Value Rate Base* (b)
1	Plant in Service	3,447,730	3,937,682
2	Less - Depreciation Reserve	1,667,813	1,895,086
3	Net Plant in Service	1,779,917	2,042,597
4	Short Term Plant Under Construction	0	0
5	Materials and Supplies	16,738	16,738
6	Allowance for Cash Working Capital	(36,041)	(36,041)
7	Deferred Income Taxes	319,800	319,800
8	Customer Deposits	8,525	8,525
9	Land Development Agreement Deposits	21,629	21,629
10	Other Assets and Liabilities	64,057	64,057
11	Total Rate Base (L.3 thru 6 less 7 thru 9)	1,474,717	1,737,397

* Including Commission, Accounting, and Pro Forma Adjustments

Supporting Schedules:
(a) B-2
(b) B-3

Recap Schedule:
A-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-2, Page 1 of 4
Title: Original Cost Rate Base
As Adjusted

Date: January 8, 1999

		[a]	[b]	[c]	[d]	[e]=sum(a.d)	[f]
		Intrastate End of Period Rate Base	Accounting Adjustments	Commission Adjustments	Proforma Adjustments	Intrastate Adjusted End of Period Rate Base	3 Yr. Rev. Rqmt. Adj's
1	Telephone Plant In Service	3,446,771	0	0	959	3,447,730	1,165
2	Short-Term Plant Under Construction	0	0	0	0	0	0
3	Materials and Supplies	16,738	0	0	0	16,738	0
4	Allowance for Cash Working Capital	(20,190)	0	(15,851)	0	(36,041)	0
5	Accumulated Depr & Amort Reserve	1,648,674	0	0	19,139	1,667,813	86,598
6	Accumulated Deferred Income Tax	327,431	0	0	(7,631)	319,800	(34,324)
7	Customer Deposits	6,341	0	2,184	0	8,525	0
8	Land Development Agreement Deposits	21,629	0	0	0	21,629	0
9	Other Assets & Liabilities	0	0	0	64,057	64,057	0
10	**End-of-Period Rate Base** (L1+L2+L3+L4-L5-L6-L7-L8+L9)	1,439,244	0	(18,035)	53,508	1,474,717	(51,109)

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-2, Page 2 of 4
Title: Original Cost Rate Base
Commission Adjustments

Date: January 8, 1999

		[a]	[b]	[c]=a+b
		Customer Deposits Adjustment (Attachment #1)	Cash Working Capital (Attachment #2)	Total Commission Adjustments
1	Telephone Plant In Service	0	0	0
2	Short-Term Plant Under Construction	0	0	0
3	Materials and Supplies	0	0	0
4	Allowance for Cash Working Capital	0	(15,851)	(15,851)
5	Accumulated Depr & Amort Reserve	0	0	0
6	Accumulated Deferred Income Tax	0	0	0
7	Customer Deposits	2,184	0	2,184
8	Land Development Agreement Deposits	0	0	0
9	Other Assets & Liabilities	0	0	0
10	**End-of-Period Rate Base** (L1+L2+L3+L4-L5-L6-L7-L8+L9)	(2,184)	(15,851)	(18,035)

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-2, Page 3 of 4
Title: Original Cost Rate Base
Pro Forma Adjustments Included

Date: January 8, 1999

		[a] Depreciation (Attachment #3)	[b] Pension Asset (Attachment #4)	[c] OPEB Adjustment (Attachment #5)	[d] Total Proforma Adjustments
1	Telephone Plant In Service	0	0	959	959
2	Short-Term Plant Under Construction	0	0	0	0
3	Materials and Supplies	0	0	0	0
4	Allowance for Cash Working Capital	0	0	0	0
5	Accumulated Depr & Amort Reserve	19,165	0	(26)	19,139
6	Accumulated Deferred Income Tax	(7,631)	0	0	(7,631)
7	Customer Deposits	0	0	0	0
8	Land Development Agreement Deposits	0	0	0	0
9	Other Assets & Liabilities	0	64,057	0	64,057
10	**End-of-Period Rate Base** (L1+L2+L3+L4-L5-L6-L7-L8+L9)	(11,534)	64,057	985	53,508

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule B-2, Page 4 of 4
Title: Original Cost Rate Base
3 Yr. Rev. Rqmt. Adj's

Date: January 8, 1999

		Depreciation Surcharge Adjustment (Attachment #6)	Year 2000 Cost Surcharge (Attachment #7)	Total 3 Yr. Rev. Rqmt. Adjustments
1	Telephone Plant In Service	0	1,165	1,165
2	Short-Term Plant Under Construction	0	0	0
3	Materials and Supplies	0	0	0
4	Allowance for Cash Working Capital	0	0	0
5	Accumulated Depr & Amort Reserve	86,210	388	86,598
6	Accumulated Deferred Income Tax	(34,324)	0	(34,324)
7	Customer Deposits	0	0	0
8	Land Development Agreement Deposits	0	0	0
9	Other Assets & Liabilities	0	0	0
10	**End-of-Period Rate Base** (L1+L2+L3+L4-L5-L6-L7-L8+L9)	(51,886)	777	(51,109)

Arizona Regulation R-14 Filing
Docket No.
Schedule B-2 Attachment 1
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Customer Deposits Adjustment

Test Year Ending June 30, 1998

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Operating Revenues	0
Operating Expenses	512
Total Operating Income Taxes	(53)
Net Operating Income	(459)
Rate Base	(2,184)
Revenue Requirement	377

In Decisions 53849 and 54843 (Docket Nos. E-1051-83-035 and E-1051-84-100) the Arizona Corporation Commission ordered U S WEST to reflect customer deposits as 100% intrastate and to bring the associated interest into regulated operating results. This adjustment reflects the order at end-of-period test year.

Arizona Regulation R-14 Filing
Docket No.
Schedule B-2 Attachment 2
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Cash Working Capital

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	0
Net Operating Income	0
Rate Base	(15,851)
Revenue Requirement	(2,862)

In Decision 54843 (Docket No. E-1051-84-100) the Arizona Corporation Commission adopted Staff's recommendation to exclude non-cash items in the lead-lag studies to determine the amount of cash working capital. This adjustment removes the non-cash items from the rate base.

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

Depreciation

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	19,165
Total Operating Income Taxes	(7,631)
Net Operating Income	(11,534)
Rate Base	(11,534)
Revenue Requirement	17,304

This adjustment reflects the annual impact of the Company's proposed depreciation represcription.

Arizona Regulation R-14 Filing
Docket No.
Schedule B-2 Attachment 4
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

Pension Asset

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	(7,374)
Total Operating Income Taxes	2,936
Net Operating Income	4,438
Rate Base	64,057
Revenue Requirement	4,106

This adjustment reflects the incremental difference between the normal pension expense credit and the 3rd quarter 1998 and estimated 4th quarter 1998 credit per SFAS 87. It also reflects the incremental difference in the pension asset because of the expense credit booked. The adjustment also reflects the reduction to the pension asset and pension liability for a transfer from the pension fund to retiree healthcare claims in accordance with IRC Section 420.

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

OPEB Adjustment

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	19,922
Total Operating Income Taxes	(7,932)
Net Operating Income	(11,990)
Rate Base	985
Revenue Requirement	20,330

This adjustment restates test year Post Retirement Benefits Other than Pensions at the level required by SFAS 106.

Arizona Regulation R-14 Filing
Docket No.
Schedule B-2 Attachment 6
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment

Depreciation Reserve Deficiency Amortization

Test Year Ending June 30, 1998

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Operating Revenues	0
Operating Expenses	86,210
Total Operating Income Taxes	(34,324)
Net Operating Income	(51,886)
Rate Base	(51,886)
Revenue Requirement	77,840

This adjustment reflects a 3 year reserve deficiency amortization.

U S WEST

Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment

Test Year Ending June 30, 1998

Year 2000 Costs

$(000)

Operating Revenues	0
Operating Expenses	5,935
Total Operating Income Taxes	(2,363)
Net Operating Income	(3,572)
Rate Base	777
Revenue Requirement	6,144

The Company has incurred and expects to incur software costs and to install additional computer hardware to meet the requirements of the Year 2000. This adjustment amortizes those costs over a 3 year period.

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-3, Page 1 of 1
Title: Fair Value Rate Base As Adjusted

Date: January 8, 1999

	A	B	C = A + B
	As of June 30, 1998		
Fair Value	Fair Value Rate Base (a)	Adjustments (b)	Fair Value Rate Base As Adjusted (c)
1 Plant in Service	3,936,587	1,095	3,937,682
2 Less - Depreciation Reserve	1,873,227	21,859	1,895,086
3 Net Plant in Service (Note 1)	2,063,360	(20,764)	2,042,597
4 Short Term Plant Under Construction	0	0	0
5 Materials and Supplies	16,738	0	16,738
6 Allowance for Cash Working Capital	(20,190)	(15,851)	(36,041)
7 Deferred Income Taxes	327,431	(7,631)	319,800
8 Customer Deposits	6,341	2,184	8,525
9 Land Development Agreement Deposits	21,629	0	21,629
10 Other Assets and Liabilities	0	64,057	64,057
11 Total Rate Base (L.3 thru 6 less 7 thru 9)	1,704,507	(31,168)	1,737,397

Note 1: RCND Net Plant in Service	A	B	C = A * B
A. 100% RCND (a)	2,328,624	50%	1,164,312
B. Original Cost Net (b)	1,798,097	50%	899,048
C. Fair Value Net Plant in Service (L. A + B)			2,063,360

Supporting Schedule:
(a) B-4
(b) B-2

Recap Schedule:
(c) B-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-4, Page 1 of 1
Title: RCND by Major Plant Accounts

Date: January 8, 1999

- Includes Embedded, FCC Deregulated & Other Plant -

Description	A Original Cost - Incl Offbook -	B Reproduction Cost New	C=D/B Condition Percent	D Reproduction Cost New Less Depreciation
TOTAL STATE				
1 2111 Land	10,159	10,159	100.00%	10,159
2 2112 Motor Vehicles	57,218	62,712	37.06%	23,239
3 2114 Special Purpose Vehicles	26	31	83.27%	26
4 2115 Garage Work Equipment	1,306	1,639	79.85%	1,309
5 2116 Other Work Equipment	32,694	40,582	75.23%	30,530
6 2121 Buildings	157,040	332,431	61.42%	204,192
7 2122 Furniture	2,015	2,691	59.84%	1,610
8 2123 Office Equipment	23,441	19,874	30.00%	5,962
9 2124 General Purpose Comp	115,401	54,891	38.72%	21,254
Central Office Equipment				
2211 Analog Electronic	193,465	176,255	81.44%	143,538
2212 Digital Electonic	716,614	642,608	59.62%	383,138
2215 Electro Mech Switch	0	0	0.00%	0
2220 Operator Systems	8,620	8,963	10.70%	959
2231 Radio Systems	38,518	39,140	50.58%	19,798
2232 Circuit Equipment	1,057,820	998,371	61.63%	615,279
10 Total COE	2,015,037	1,865,338	62.33%	1,162,712
11 2311 Station Apparatus	3	3	41.28%	1
12 2321 Customer Premise Wire	0		0.00%	
13 2341 Large PBX	0			
14 2351 Public Tele Term. Equip	15,693	15,693	29.95%	4,700
15 2362 Other Terminal Equip	46,909	50,729	75.97%	38,538
16 2411 Poles	44,157	199,258	15.69%	31,256
17 2421 Aerial Cable	160,037	298,172	41.68%	124,283
18 2422 Underground Cable	413,817	620,548	30.34%	188,301
19 2423 Buried Cable	1,142,081	1,652,196	49.57%	818,925
20 2424 Submarine Cable	3	3	60.51%	2
21 2426 Intrabldg Network Cable	39,959	84,725	36.50%	30,925
22 2431 Aerial Wire	7,729	10,824	70.21%	7,599
23 2441 Conduit Systems	289,227	574,241	62.45%	358,601
24 2681 Capital Leases	54,014	54,014	100.00%	54,014
25 2682 Leasehold Improvement	25,205	25,205	100.00%	25,205
26 2690 Intangibles	980	980	100.00%	980
27 2001 Total Plant in Service (L.1 thru 26)-L10	4,654,150	5,976,941	52.61%	3,144,324
28 Reproduction Cost New Factor (Original Cost Plant / RCN Plant)	1.284			
Arizona Intrastate Operations				
29 Intrastate Ratio	74.06%	74.06%		74.06%
30 Intrastate Plant in Service (L27 x L29)	3,446,771	4,426,403		2,328,624

Supporting Schedule:
(a) E-5

Recap Schedule:
B-3

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U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule B-5, Page 1 of 1
Title: Computation of Allowance
For Cash Working Capital
Date: January 8, 1999

Computed in accordance with prior Commission orders.

Supporting Schedule:
Results of Lead Lag Study

Recap Schedule:
B-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule C-1 Page 1 of 1
Adjusted Test Year Income Statement

Date: January 8, 1999

		[a]	[b]	[c]	[d]	[e]=sum(a.d)	[f]
		Regulated Intrastate	Accounting Adjustment Summary Total	Commission Adjustment Summary Total	Proforma Adjustment Summary Total	Intrastate As Adjusted	3 Yr. Rev. Rqmt. Adjustments
Revenues							
1	Local Service Revenues	880,744	0	1,855	(13,227)	869,372	0
2	Network Access Service Revenues	121,936	0	0	(2,066)	119,870	0
3	Long Distance Network Service Rev.	39,559	0	0	(6,913)	32,646	0
4	Miscellaneous	81,628	0	0	7,209	88,837	0
5	Total Oper. Rev. (L1 thru L4)	1,123,866	0	1,855	(14,997)	1,110,724	0
Expenses							
6	Maintenance	235,323	0	0	38,782	274,105	0
7	Engineering Expense	13,771	0	0	3,891	17,662	0
8	Network Operations	34,643	0	0	(9,355)	25,288	0
9	Network Administration	1,933	0	0	70	2,003	0
10	Access Expense	2,040	0	0	(498)	1,542	0
11	Other	2,079	0	0	822	2,901	0
12	Total Cost of Svcs & Products(L6 thru L1'	289,789	0	0	33,712	323,501	0
13	Customer Operations	193,252	0	0	498	193,750	0
14	Corporate Operations	170,108	(1)	(87)	7,542	177,562	5,547
15	Property & Other Taxes	54,687	1	2	(3,259)	51,431	0
16	Uncollectibles	11,377	0	19	(1,612)	9,784	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	429,424	0	(66)	3,169	432,527	5,547
18	Other Operating Income & Expense	1,660	0	512	0	2,172	(663)
19	Depreciation Expense	244,809	0	(13)	19,165	263,961	86,598
20	Universal Service Fund	(1,573)	0	0	0	(1,573)	0
21	Link Up America	(10)	0	0	0	(10)	0
22	Total Operating Expense(L12+L17 thru L2	964,099	0	433	56,046	1,020,578	91,482
23	Income From Operations (L5-L22)	159,767	0	1,422	(71,043)	90,146	(91,482)
Taxes							
24	Federal Income Tax	41,531	(1,464)	(1,136)	(23,023)	15,908	(29,646)
25	State & Local Income Tax	7,617	(1,452)	(260)	(5,263)	642	(6,777)
26	**Net Operating Income (L23-L24-L25)**	110,619	2,916	2,818	(42,757)	73,596	(55,059)
Other							
27	Nonoperating Income & Expense	6,390	0	0	0	6,390	0
28	Nonoperating Income Tax	(222)	1,047	0	0	825	0
29	Net Operating Earnings (L26-L27-L28)	104,451	1,869	2,818	(42,757)	66,381	(55,059)
30	Interest Expense	40,791	0	4,925	0	45,716	0
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	63,660	1,869	(2,107)	(42,757)	20,665	(55,059)

Supporting Schedules:
E-2
C-2

Arizona Regulation R-14 Filing

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Schedule C-2 Page 1 of 4
Adjusted Test Year Income Statement
Summary of Accounting Adjustments
Date: January 8, 1999

		[a] Remove Media Split Costs Attachment # 1	[b] Income Tax True-Up Attachment # 2	[c]=a+b Total Accounting Adjustments
Revenues				
1	Local Service Revenues	0	0	0
2	Network Access Service Revenues	0	0	0
3	Long Distance Network Service Rev.	0	0	0
4	Miscellaneous	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	0	0
Expenses				
6	Maintenance	0	0	0
7	Engineering Expense	0	0	0
8	Network Operations	0	0	0
9	Network Administration	0	0	0
10	Access Expense	0	0	0
11	Other	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0
13	Customer Operations	0	0	0
14	Corporate Operations	0	0	0
15	Property & Other Taxes	0	0	0
16	Uncollectibles	0	0	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	0	0
18	Other Operating Income & Expense	0	0	0
19	Depreciation Expense	0	0	0
20	Universal Service Fund	0	0	0
21	Link Up America	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	0	0	0
23	Income From Operations (L5-L22)	0	0	0
Taxes				
24	Federal Income Tax	(715)	(749)	(1,464)
25	State & Local Income Tax	(108)	(1,344)	(1,452)
26	**Net Operating Income (L23-L24-L25)**	823	2,093	2,916
Other				
27	Nonoperating Income & Expense	0	0	0
28	Nonoperating Income Tax	1,047	0	1,047
29	Net Operating Earnings (L26-L27-L28)	(224)	2,093	1,869
30	Interest Expense	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0
32	Extraordinary Items	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(224)	2,093	1,869

Supporting Schedule: C-2 Attachments

Recap Schedule: C-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule C-2 Page 2 of 4
Adjusted Test Year Income Statement
Summary of Commission Adjustments
Date: January 8, 1999

		Removal of Merger Costs Attachment #3	Disallowance of Non Employee Concession Attachment #4	Customer Deposits Adjustment Attachment #5	Bellcore Adjustment Attachment #6	Interest Synchronization Attachment #7	Total Commission Adjustments
Revenues							
1	Local Service Revenues	0	1,855	0	0	0	1,855
2	Network Access Service Revenues	0	0	0	0	0	0
3	Long Distance Network Service Rev.	0	0	0	0	0	0
4	Miscellaneous	0	0	0	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	1,855	0	0	0	1,855
Expenses							
6	Maintenance	0	0	0	0	0	0
7	Engineering Expense	0	0	0	0	0	0
8	Network Operations	0	0	0	0	0	0
9	Network Administration	0	0	0	0	0	0
10	Access Expense	0	0	0	0	0	0
11	Other	0	0	0	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0	0	0	0
13	Customer Operations	0	0	0	0	0	0
14	Corporate Operations	0	0	0	(87)	0	(87)
15	Property & Other Taxes	0	2	0	0	0	2
16	Uncollectibles	0	19	0	0	0	19
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	21	0	(87)	0	(66)
18	Other Operating Income & Expense	0	0	512	0	0	512
19	Depreciation Expense	(13)	0	0	0	0	(13)
20	Universal Service Fund	0	0	0	0	0	0
21	Link Up America	0	0	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	(13)	21	512	(87)	0	433
23	Income From Operations (L5-L22)	13	1,834	(512)	87	0	1,422
Taxes							
24	Federal Income Tax	9	594	(43)	28	(1,724)	(1,136)
25	State & Local Income Tax	2	136	(10)	6	(394)	(260)
26	**Net Operating Income (L23-L24-L25)**	2	1,104	(459)	53	2,118	2,818
Other							
27	Nonoperating Income & Expense	0	0	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	2	1,104	(459)	53	2,118	2,818
30	Interest Expense	(16)	0	(379)	0	5,320	4,925
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	18	1,104	(80)	53	(3,202)	(2,107)

Supporting Schedule:
C-2 Attachments

Recap Schedule:
C-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule C-2 Page 3 of 4
Adjusted Test Year Income Statement
Summary of Proforma Adjustments
Date: January 8, 1999

		End of Period Annualization Adjustment	Wage Increase	Depreciation	Pension Asset	OPEB Adjustment	Total Proforma Adjustments
		Attachment #8	Attachment #9	Attachment #10	Attachment #11	Attachment #12	
Revenues							
1	Local Service Revenues	(13,227)	0	0	0	0	(13,227)
2	Network Access Service Revenues	(2,066)	0	0	0	0	(2,066)
3	Long Distance Network Service Rev.	(6,913)	0	0	0	0	(6,913)
4	Miscellaneous	7,209	0	0	0	0	7,209
5	Total Oper. Rev. (L1 thru L4)	(14,997)	0	0	0	0	(14,997)
Expenses							
6	Maintenance	27,853	5,344	0	167	5,418	38,782
7	Engineering Expense	3,568	177	0	(282)	428	3,891
8	Network Operations	(10,483)	930	0	(4,897)	5,095	(9,355)
9	Network Administration	(98)	55	0	7	106	70
10	Access Expense	(498)	0	0	0	0	(498)
11	Other	819	1	0	0	2	822
12	Total Cost of Svcs & Products(L6 thru L11)	21,161	6,507	0	(5,005)	11,049	33,712
13	Customer Operations	(7,947)	3,731	0	(2,369)	7,083	498
14	Corporate Operations	4,314	1,438	0	0	1,790	7,542
15	Property & Other Taxes	(3,259)	0	0	0	0	(3,259)
16	Uncollectibles	(1,612)	0	0	0	0	(1,612)
17	Tot Selling, Gen. & Admin.(L13 thru L16)	(8,504)	5,169	0	(2,369)	8,873	3,169
18	Other Operating Income & Expense	0	0	0	0	0	0
19	Depreciation Expense	0	0	19,165	0	0	19,165
20	Universal Service Fund	0	0	0	0	0	0
21	Link Up America	0	0	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	12,657	11,676	19,165	(7,374)	19,922	56,046
23	Income From Operations (L5-L22)	(27,654)	(11,676)	(19,165)	7,374	(19,922)	(71,043)
Taxes							
24	Federal Income Tax	(8,962)	(3,784)	(6,211)	2,390	(6,456)	(23,023)
25	State & Local Income Tax	(2,048)	(865)	(1,420)	546	(1,476)	(5,263)
26	**Net Operating Income (L23-L24-L25)**	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)
Other							
27	Nonoperating Income & Expense	0	0	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)
30	Interest Expense	0	0	0	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)

Supporting Schedule:
C-2 Attachments

Recap Schedule:
C-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
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Arizona Regulation R-14 Filing

Schedule C-2 Page 4 of 4
Adjusted Test Year Income Statement
Summary of Surcharge Adjustments
Date:

		Depreciation Surcharge Attachment #13	Year 2000 Cost Surcharge Attachment #14	Gain from Belcore Sale Attachment #15	Total 3 Yr. Rev. Rqmt. Adjustments
Revenues					
1	Local Service Revenues	0	0	0	0
2	Network Access Service Revenues	0	0	0	0
3	Long Distance Network Service Rev.	0	0	0	0
4	Miscellaneous	0	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	0	0	0
Expenses					
6	Maintenance	0	0	0	0
7	Engineering Expense	0	0	0	0
8	Network Operations	0	0	0	0
9	Network Administration	0	0	0	0
10	Access Expense	0	0	0	0
11	Other	0	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0	0
13	Customer Operations	0	0	0	0
14	Corporate Operations	0	5,547	0	5,547
15	Property & Other Taxes	0	0	0	0
16	Uncollectibles	0	0	0	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	5,547	0	5,547
18	Other Operating Income & Expense	0	0	(663)	(663)
19	Depreciation Expense	86,210	388	0	86,598
20	Universal Service Fund	0	0	0	0
21	Link Up America	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	86,210	5,935	(663)	91,482
23	Income From Operations (L5-L22)	(86,210)	(5,935)	663	(91,482)
Taxes					0
24	Federal Income Tax	(27,938)	(1,923)	215	(29,646)
25	State & Local Income Tax	(6,386)	(440)	49	(6,777)
26	**Net Operating Income (L23-L24-L25)**	(51,886)	(3,572)	399	(55,059)
Other					
27	Nonoperating Income & Expense	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	(51,886)	(3,572)	399	(55,059)
30	Interest Expense	0	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0	0
32	Extraordinary Items	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(51,886)	(3,572)	399	(55,059)

Supporting Schedule:
C-2 Attachments

KAREN A. STEWART

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

KAREN A. STEWART

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

1. Current Responsibilities

My current responsibilities include representing U S WEST in regulatory proceedings for a variety of U S WEST products and services, including the high capacity services that are the subject of this testimony.

2. Purpose of Testimony

The purpose of my testimony is to demonstrate that the Arizona market for high capacity digital services is very competitive. U S WEST faces intense competition from both established facilities-based competitors (with substantial resources and extensive fiber networks) and an ever growing list of resellers. Given this level of competition, U S WEST requests that the Commission approve the deregulation of the following digital high capacity services: DS1 and DS3 transport services (including Switched Access transport), Frame Relay Service (FRS), ATM Cell Relay Service (ATM CRS), LAN Switching Services (LSS), Transparent LAN Service (TLS), and Megabit Services. In light of U S WEST's lack of market power for these services, U S WEST believes that competition rather than regulation ought to control prices, terms and conditions.

3. Summary of Testimony

U S WEST Communications, Inc. (U S WEST), pursuant to A.R.S. § 40-281(e), requests that the Arizona Corporation Commission (Commission) exercise its authority to deregulate high capacity data services provided by U S WEST in Arizona, and requests the withdrawal of the filed tariffs applicable to such services.

In this testimony, U S WEST demonstrates that the Arizona market for high capacity services is very competitive. U S WEST faces intense competition from both resellers and established facilities-based competitors with substantial resources and extensive fiber networks. These established companies, which include ELI, GST, the combined AT&T/TCG, and merged companies MCI, MFS, WorldCom and Brooks Fiber (MCI WorldCom), have access to financial resources equal to or greater than U S WEST's with which to fund expansion of their networks.

Attached as Exhibit KAS-1 is an economic evaluation conducted by Professors Alfred E. Kahn and Timothy J. Tardiff, who conclude that U S WEST lacks market power in the Phoenix area for high capacity services. In light of U S WEST's lack of market power, Kahn and Tardiff conclude that competition is sufficient to constrain prices and other terms and conditions of service. Clearly, regulation is not necessary to ensure that U S WEST's rates and practices remain just, reasonable and non-discriminatory.

The Kahn and Tardiff analysis is specific to the Phoenix Metropolitan Area (MSA). However, I will be providing additional information about the availability of alternatives in other areas such as Tucson. The Phoenix and Tucson MSAs represent the vast majority of the high capacity market in the state. For example, of U S WEST's DS1 channel terminations in the state, about 90% percent are located in either Phoenix or Tucson. Therefore, it is reasonable for the Commission to place more emphasis on the competitive status of high capacity services in Arizona by focusing on the Phoenix and Tucson MSAs.

First, U S WEST has a steadily declining market share. The market analysis conducted by Quality Strategies (attached as Exhibit KAS-2) demonstrates that competitive providers have captured more than 70 percent of the retail market for high capacity services. Perhaps the most important trend statistic is the fact that, between the second and fourth quarter of 1997, competitive providers captured about half of the growth in demand for high capacity services. Moreover, it is important to note that the combined competitive providers' market share has been growing at even a faster pace than the rapid growth in the demand for high capacity services in the Phoenix area.

Second, there is high demand elasticity. The customers that tend to purchase high capacity facilities – medium to large businesses, governmental entities and other carriers – are highly sensitive to price and other service characteristics. The ability of U S WEST's largest carrier customers to migrate high capacity traffic to their own affiliated fiber networks further increases their bargaining ability.

Third, there is high supply elasticity. Competitive providers have deployed more than 800 route miles of optical fiber in the Phoenix MSA. In addition, e.spire claims that its Tucson 108 mile fiber optic ring is the largest in that city[1]. These extensive fiber backbone networks could handle all of U S WEST's end user and transport traffic at less than eight percent capacity. A majority of U S WEST's current high capacity demand is located within 100 feet of the competitive providers' networks, which means that it could be absorbed almost immediately at minimal cost. Moreover, as the attached report prepared by POWER Engineers, Inc. (PEI) (Exhibit KAS-3) demonstrates, competitive providers would not incur significant costs to extend their fiber networks to absorb the vast majority of U S WEST's current high capacity demand. In addition, the impressive growth of competitive providers' market share demonstrates that the cost of entry is not prohibitive.

Fourth, U S WEST does not enjoy an advantage in terms of its costs, structure, size and resources. Indeed, the combined AT&T/TCG and MCI WorldCom companies have a significant advantage in terms of scale economies and access to capital, not to mention the advantage of being able to provide interLATA services. The presence of facility-based competitive activity in the market while prices are dropping steadily is a strong indication that U S WEST does not have a cost advantage in the market.

Finally, my testimony describes the specific high capacity and associated data services for which U S WEST requests deregulation. These services include: DS1 and DS3 transport services (including

1 e.spire Tucson web site

Switched Access transport), Frame Relay Service (FRS), ATM Cell Relay Service (ATM CRS), LAN Switching Services (LSS), Transparent LAN Service (TLS), and Megabit Services

IDENTIFICATION OF WITNESS

Q. **PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH U S WEST.**

A. My name is Karen A. Stewart. My title is Director, Markets-Regulatory Strategy. My office is located at 421 SW Oak Street, Portland, Oregon.

Q. **PLEASE DESCRIBE YOUR EDUCATION BACKGROUND AND EMPLOYMENT EXPERIENCE.**

A. I received a Bachelor of Science degree in Business Administration from Portland State University in 1980, and a Masters degree in Business Administration from the University of Oregon in July, 1994. I have been employed by U S WEST since 1981 (then Pacific Northwest Bell). I have held a variety of positions in U S WEST, including sales, product management, regulatory affairs, issues management, and E911 service and technical design.

Q. **HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY PUBLIC UTILITY COMMISSION?**

A. Yes. Under the name of Karen A. Baird, I have testified in the states of Colorado, Idaho, Iowa, New Mexico, Minnesota, Nebraska, North Dakota, Oregon, South Dakota, Utah and Washington.

PURPOSE OF TESTIMONY

Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. The purpose of my testimony is to demonstrate that the Arizona market for high capacity digital services is robustly competitive. U S WEST faces intense competition from both established facilities-based competitors (with substantial resources and extensive fiber networks) and an ever growing list of resellers. Given this level of competition, U S WEST requests that the Commission allow the deregulation of the following digital high capacity services: DS1 and DS3 transport services (including Switched Access transport), Frame Relay Service (FRS), ATM Cell Relay Service (ATM CRS), LAN Switching Services (LSS), Transparent LAN Service (TLS), and Megabit Services. In light of U S WEST's lack of market power for these services, the competition is sufficient to constrain U S WEST's ability to impose anti-competitive prices and other terms and conditions of service. Additionally, these competitive high capacity services are not essential basic telephone services.

BASIS FOR DEREGULATION REQUEST

Q. WHAT IS THE BASIS FOR THE U S WEST REQUEST TO DEREGULATE HIGH CAPACITY SERVICES?

A. This request is made pursuant to A.R.S. § 40-281(e), which provides:

> When the commission determines after notice and hearing that any product or service of a telecommunications corporation is neither essential nor integral to the public service rendered by such corporation, it shall declare that such product or service is not subject to regulation by the commission.

My testimony focuses on the factual development of the competitive market place that provides clear evidence to this Commission that U S WEST does not have market power with respect to high capacity services.

In general, regulation of telecommunications services has always been a surrogate for the competitive market place. Now, as demonstrated by this testimony, the competitive market place for high capacity digital service has developed to a point where regulation is no longer necessary. In fact, the continued regulation of these services may hinder the ability of Arizona customers to realize the full benefits of a competitive market place.

Q. CAN YOU PROVIDE EXAMPLES OF BENEFITS FOR ARIZONA CUSTOMERS IF U S WEST'S HIGH CAPACITY SERVICES WERE DEREGULATED?

A. Yes. U S WEST appears to be the only carrier that maintains the required tariffs and files cost support for high capacity services. This not only imposes an unfair regulatory burden on U S WEST, it gives all of our competitors advance knowledge of our rates, terms and conditions. The competitors can use this advance knowledge to make instant changes to their service offerings.

What competitors frequently do is use U S WEST's rates as a bench mark that they can marginally undercut, versus having to provide a customer with their best rates based on their own costs and network efficiencies

Q. WHAT ABOUT AREAS WHERE COMPETITORS MAY NOT HAVE THEIR OWN NETWORKS INSTALLED?

A. Later in my testimony I will discuss the ability of competitors to expand their networks in a fast and efficient manner to reach urban business customers. In reality, with the resale and unbundling requirements of the Telecommunications Act of 1996, our competitors have access to the U S WEST network to reach customers statewide (both urban and rural) with cost-based network rates from U S WEST.

These resale and unbundling requirements mean that U S WEST cannot sustain unreasonable mark-ups over cost in rural areas (even in areas without facility based competitors) because competitors can quickly begin servicing these customers on a resale basis. The large established competitors in Arizona are quite capable of seamlessly integrating U S WEST network facilities with their own facilities and services to provide an end to end high capacity service to the rural market.

Q. HAS U S WEST APPLIED FOR FORBEARANCE FROM REGULATION AS A DOMINANT CARRIER OF HIGH CAPACITY SERVICES AT THE INTERSTATE LEVEL?

A. Yes. On August 24, 1998, U S WEST filed with the Federal Communications Commission (FCC) a petition for forbearance from regulation as a dominant carrier in the Phoenix Metropolitan Statistical Area (MSA), for special access and dedicated transport for switched access at DS1 and higher transmission levels. This petition is still pending before the FCC.[2] In support of that filing, U S WEST included several reports on market participants, market descriptions and the

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[2] CC Docket No. 98-157

engineering of the Phoenix high capacity market. I will rely on those reports to describe the competitive high capacity market.

Q. WHY IS THE DS1 AND DS3 HIGH CAPACITY COMPETITIVE MARKET PERTINENT TO THE DEREGULATION OF OTHER HIGH CAPACITY SERVICES?

A. DS1 and DS3 transport facilities are the backbone that enable the provision of other high capacity services.

COMPETITIVE MARKET PLACE

Q. HOW CAN THE COMMISSION ASSESS THE MARKET POWER U S WEST HAS FOR HIGH CAPACITY SERVICES IN ARIZONA?

A. In assessing market power, the Commission can rely on several factors as part of its analysis, including: (i) market participants; (ii) market share; (iii) the demand elasticity of customers; (iv) the supply elasticity of the market; and (v) the carrier's cost, structure, size and resources. Assessment of these general characteristics of the Phoenix area market for high capacity services demonstrates that U S WEST cannot exercise market power.

Q. WHO ARE THE MARKET PARTICIPANTS?

A. Prior to talking specifically about high capacity services, it is important to note that the business market in Arizona is attracting a broad array of powerful, well-funded competitors known as competitive local exchange carriers (CLECs) or Competitive Access Providers (CAPs). These competitors have at least three ways to provide services to end user customers.

First, a CLEC may provide a service solely over its own network and switching facilities. As demonstrated by the Quality Strategies study of high capacity services in Phoenix, CLECs have over 800 miles of fiber optic cable and have several hundred buildings connected to their networks.

Second, a CLEC may also purchase bits and pieces of the U S WEST network, known as unbundled network elements (UNEs), and combine the UNEs with their own facilities and switching to offer a complete service to an end-user. In order to combine U S WEST UNEs with parts of their own networks, a CLEC collocates in a U S WEST central office

Third, CLECs may simply purchase services from U S WEST at a discount and resell those services to their customers. Frequently their customers are oblivious to what carrier is providing the underlying network facilities.

There are no obstacles to market entry as evidenced by the following facts:

- 65 CLECs have applied for certification to provide local telecommunications service; 16 have been certified to date.
- 55 collocation cages have been completed and are being occupied by CLECs; there are also 66 virtual collocations

By collocating in just 31 of U S WEST's Arizona central offices so far, the CLECs are able to reach and target 58 percent of the total access lines currently served by U S WEST in Arizona. Because CLECs have the ability to pick and choose where they serve and what services they will offer, they can effectively target their investments to generate the greatest returns. Clearly, the vast majority of business customers in Arizona have competitive alternatives available to them right now for all services, not just high capacity services.

Q. WHO ARE THE MARKET PARTICIPANTS SPECIFIC TO HIGH CAPACITY SERVICES?

A. The Arizona market for high capacity services is characterized by a number of established competitors, each with substantial resources. The following is a brief description of the major facilities-based market participants:

ELI has over 400 route miles of fiber in the Phoenix area and 30 to 45 buildings on its network.[3] ELI also claims to have invested $37 million in new facilities in Phoenix.[4] Far from being a start-up, ELI is a subsidiary of Citizens Utilities Company, a large utility company and full-service telecommunications services provider.[5] Moreover, ELI is a rapidly growing company. In 1997 alone, ELI's revenues increased 95 percent, from $31.3 million to $61.1 million. ELI's network services revenue (which includes private line services) increased from $18.7 million in 1996 to $33.5 million in 1997, an increase of 78.9 percent.[6] In addition, ELI's route miles increased from 1,428 to 2,494, an increase of 74.6 percent, and its fiber miles increased from 97,665 miles to 140,812 miles, an increase of 44.2 percent.[7]

GST has approximately 300 route miles of fiber in Arizona, including more than 11 miles of fiber in downtown Phoenix and a long haul fiber link between Phoenix and Tucson.[8] GST has wired 15 to 25 buildings on its network. GST also installed more than 50,000 access lines in 1997 and 16,000 additional access lines in the first quarter of 1998.[9] In the first quarter of 1998, GST acquired a long distance company, Call America Phoenix.[10]

MCI has 20 to 40 route miles of fiber in the Phoenix area and 25 to 35 buildings on its network.[11] The merger of MCI and MFS WorldCom has now been approved. MCI WorldCom has 75 route

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3 Exhibit KAS-2, Quality Strategies Report at 26.

4 http://www.eli.net/phxswitch.html.

5 http://www.eli.net/history.html. Citizens Utilities had revenues of $1.4 billion in 1997, an increase of 8% over 1996. http://www.czn.net/PressReleases/pr031298.html.

6 http://www.eli.net/annual.pdf.

7 Id.

8 Exhibit KAS-2, Quality Strategies Report at 26.

9 http://www.gstcorp.com/investors/March10k.html.

10 http.//www.gstcorp.com/press/gen86.html.

11 Exhibit KAS-2, Quality Strategies Report at 25.

miles of fiber in the Phoenix area and more than 50 buildings on its network.[12] In addition MCI WorldCom has access to the Brooks Fiber facilities in Tucson.

<u>AT&T/TCG</u> has over 300 route miles in the Phoenix area and more than 150 buildings on its network.[13] The merger of TCG and AT&T was recently completed, and AT&T has already begun the process of migrating all of its dedicated high capacity traffic from U S WEST to its affiliated TCG fiber network.

Clearly, none of these providers of high capacity services can be classified as "start-up" companies. According to Quality Strategies, ELI and TCG entered the market in 1994, MFS WorldCom entered the market in 1995, MCI entered the market in 1996 and GST entered the market in 1997. Further, these companies have access to financial resources equal to or greater than U S WEST's that can be used to fund expansion of their networks serving Phoenix customers of high capacity services.

For example, in the past two years, MCI WorldCom acquired two competitive providers, MFS and Brooks Fiber, for a combined price of $16.4 billion – an amount almost identical to what SBC paid to acquire Pacific Telesis. The combined MCI and MFS WorldCom company has 22 million customers and revenues of more than $30 billion.[14] Similarly, AT&T recently acquired TCG at a cost of $11.3 billion and announced its intention to acquire TCI at a cost of $48 billion. The sheer size of the combined AT&T/TCG and MCI WorldCom companies dwarfs U S WEST.

Equally as important, the recently completed mergers of TCG with AT&T, and MCI with MFS WorldCom, means the two largest purchasers of high capacity services in Phoenix now have their own competitive fiber networks. This is a significant development, given that AT&T/TCG and MCI

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12 <u>Id.</u>

13 <u>Id.</u>

14 http://www.wcom.com/about_worldcom/press_releases/archive/1998/980914.shtml.

WorldCom account for approximately half of U S WEST's high capacity business in the Phoenix MSA. In addition, MCI WorldCom has access to its affiliate extensive fiber network in Tucson.

In fact, U S WEST already is experiencing the effects of the mergers, as significant portions of these customers' high capacity services have been migrated to the affiliated competitive fiber networks. Kahn and Tardiff observe that "[i]t would be difficult to conceive of a more substantial consequent diminution of whatever market power [U S WEST] might previously have enjoyed."[15]

In addition to giving AT&T and MCI WorldCom access to their own high capacity facilities, the consolidations by AT&T and MCI WorldCom with facilities-based access providers will result in the merged companies now competing head-to-head with U S WEST in the Phoenix and Tucson area markets for high capacity services.

Q. HAS THE U S WEST MARKET SHARE FOR HIGH CAPACITY SERVICES DECLINED?

A. Yes. U S WEST's steadily declining market share for high capacity services in the Phoenix MSA supports the conclusion that U S WEST lacks market power.[16] Quality Strategies uses DS1 equivalents as the basis for its market share calculations because DS1 bandwidth is deemed the baseline for the high capacity services market.[17] For analytical purposes, Quality Strategies describes the Phoenix area market for high capacity services as a three-tier market, with U S WEST and other providers selling services to end users, resellers and other carriers for transport purposes.[18] As the following chart depicts, this market can be sub-divided based on who high capacity services are sold to – retail and wholesale segments – versus who is ultimately using the underlying facilities – the "provider" and "transport" segments.[19]

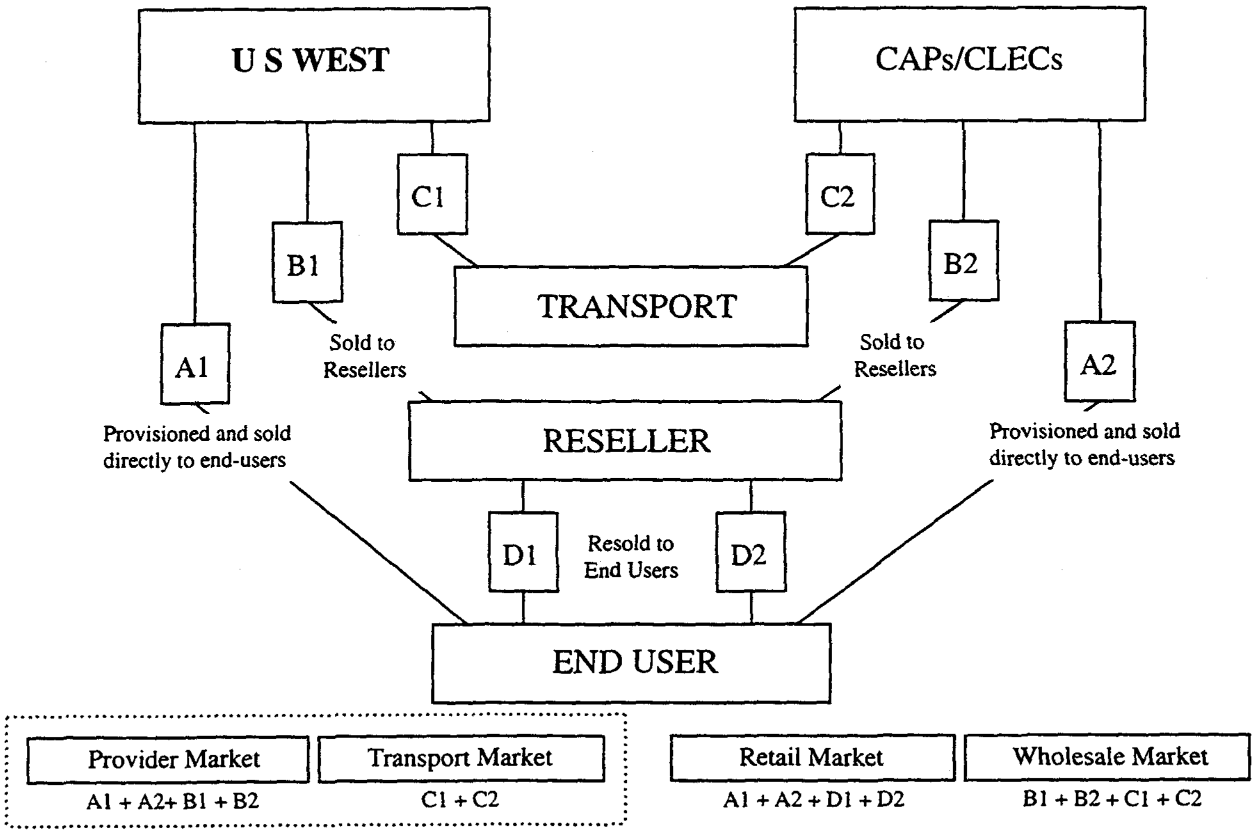
[15] Exhibit KAS-1, Kahn and Tardiff Paper at 6.

[16] See AT&T Reclassification Order, 11 FCC Rcd. at 3307 ¶ 67.

[17] Exhibit KAS-2, Qualities Strategies Report at 35.

[18] Id. at 9-10.

[19] Id.



The attached market analysis conducted by Quality Strategies shows that competitive providers have captured more than 70 percent of the retail market for high capacity services.[20] This is the most important market share statistic because it identifies who has the direct relationship with the customer. The carrier who has the direct relationship with the customer clearly has the advantage in selling additional services. In fact, in a resale situation, the customer may not even be aware of what carrier actually provides the underlying high capacity facilities.

Therefore, the competitive providers in Phoenix already have a significant marketing advantage over U S WEST, regardless of the actual volume of facilities U S WEST provides. All competitors in the Phoenix and Tucson MSAs (other than U S WEST), can take advantage of their relationships with customers to offer a full service package which includes interLATA voice and data services.

[20] Id. at 17. The combined AT&T/TCG and MCI WorldCom companies comprise over 50% of the retail market.

Moreover, expansion of competitive providers' business has been even more rapid than the impressive 13 percent growth in the demand for high capacity services in the Phoenix market.[21] During the period from the fourth quarter of 1994 to the fourth quarter of 1997, the competitive providers' market share of the provider segment (i.e., high capacity services ultimately purchased by end users) increased from less than six percent to 28 percent.[22] The competitive providers' market share of the transport segment (i.e., high capacity services purchased by carriers for transport) also is growing rapidly, increasing from five percent to 16 percent between the second quarter and the fourth quarter of 1997 alone.[23]

Perhaps the most significant trend statistic is the fact that, between the second and fourth quarters of 1997, competitive providers captured 54 percent of the growth in demand of the provider segment and 42 percent of the growth in demand of the transport segment.[24] Share of growth is the primary indicator of what a competitor's installed-base market share will look like in the future – and competitive providers in the Phoenix MSA have captured a majority share of market growth over the past several years.[25]

U S WEST's rapid reduction in market share is largely the result of facilities build-out on the part of competitive providers in the Phoenix area and their focus on the large business market. U S WEST's share of the facilities-provider market segment is likely to decrease rapidly as customers, particularly the largest carrier customers, migrate traffic onto their own fiber networks.[26]

[21] Exhibit KAS-1, Kahn and Tardiff Paper at 7. With this rate of growth, demand for high capacity services will double in about 5 ½ years.

[22] Exhibit KAS-2, Quality Strategies Report at 16.

[23] Id. at 14.

[24] Id. at 15.

[25] Id. at 7.

[26] Id. at 31.

Kahn and Tardiff also assert that the recent strong growth in competitive provider market share is likely to continue, and may even accelerate, given the rapid growth of competitive provider market share nationwide.[27] They note that, during the first quarter of 1998, competitive providers added more business lines nationwide than the Regional Bell Operating Companies ("RBOC").[28]

Q. ARE CUSTOMERS IN ARIZONA WILLING TO SWITCH CARRIERS FOR HIGH CAPACITY SERVICES?

A. Yes. Referred to as "demand elasticity", you can measure the willingness and ability of a carrier's customers to switch to a competitive provider, or to otherwise change the amount of services they purchase from the carrier in response to a change in the price or quality of the services. High demand elasticity indicates that customers are willing and able to switch to another service provider in order to obtain price reductions or desired features. It also indicates that the particular service market is subject to competition.[29]

Kahn and Tardiff conclude that the demands of business customers are highly elastic. They agree with the FCC that business customers are sophisticated buyers who typically receive and consider alternative proposals from several vendors. In the case of high capacity services, the primary users of these services – other carriers – have both the incentive and the ability to drive a hard bargain for good prices and levels of service by the threat of going elsewhere.[30] Clearly, the ability of U S WEST's largest carrier customers to migrate high capacity traffic to their own affiliated fiber networks further increases their bargaining ability in the marketplace.

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[27] Exhibit KAS-1, Kahn and Tardiff Paper at 7.

[28] Id. at 8 (citing Statement of Heather Gold, FCC En Banc on State of Local Competition, January 29, 1998 and Salomon Smith Barney "CLECs Surpass Bells in Net Business Line Additions for the First Time," May 6, 1998).

[29] In the Matter of COMSAT Corporation, File No. 60-SAT-ISP-97; IB Docket No. 98-60; File No. 14-SAT-ISP-97; RM-7913; CC Docket No. 80-634, Order and Notice of Proposed Rulemaking ¶ 27 (1998) ("Comsat Reclassification Order"), at ¶ 71.

[30] Exhibit KAS-1, Kahn and Tardiff Paper, (citing Michael E. Porter, Competition in the Long-Distance Telecommunications Market, September 1993). Kahn and Tardiff note that the Commission cited the Porter Study when concluding that demand elasticity considerations supported the conclusion that AT&T was non-dominant in the long distance market. Id.

Moreover, so long as U S WEST is prohibited from offering interLATA services, the ability of competitive providers to offer a complete package of telecommunications services which includes interLATA voice and data services, gives them a "great advantage" over U S WEST in the marketplace.[31]

Q. WHAT IS SUPPLY ELASTICITY?

A. Supply elasticity refers to the ability of suppliers in a given market to increase the quantity of services supplied in response to an increase in price. There are two factors that determine supply elasticities in the market. The first is the supply capacity of existing competitors, because supply elasticities tend to be high if existing competitors have or can easily acquire additional capacity in a relatively short time period.[32] The second factor is the existence of low barriers to entry, because supply elasticities tend to be high if new suppliers can enter the market relatively easily and add to existing capacity.

Q. HOW ELASTIC IS THE SUPPLY OF HIGH CAPACITY SERVICES IN PHOENIX?

A. Quality Strategies has determined that U S WEST's competitors have more than sufficient readily available excess capacity. As a group, these five facilities-based competitors have installed more than 800 route miles of optical fiber in the Phoenix MSA, typically deploying cable consisting of 144 individual fiber elements along the network backbone.[33] With current technology, these competitive fiber networks should be capable of transporting more traffic than the Phoenix area will ever generate. Indeed, equipped as they are today, the competitive fiber backbone networks could handle all of U S WEST's end-user and transport traffic at less than <u>eight percent</u> capacity.[34]

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[31] <u>Id.</u> at 11.

[32] <u>Comsat Reclassification Order</u> ¶ 78.

[33] Exhibit KAS-2, Quality Strategies Report at 6, 27. Exhibit KAS-4 hereto is a map illustrating the existing competitive provider fiber backbone networks in the Phoenix area.

[34] Exhibit KAS-2, Quality Strategies Report at 29.

Q. ARE THERE ANY CONSTRAINTS TO EXPANDING SERVICE TO OTHER U S WEST CUSTOMERS?

A. The only real constraint on expanding service to U S WEST's customers in the near-term is the fact that competitive providers cannot provide service to "off-network" locations without building facilities to connect these sites to their fiber backbone networks. In most cases, this is not an issue at all. Approximately 65 percent of U S WEST's current high capacity demand in the Phoenix area is located within 100 feet of existing competitive provider fiber networks, which means that it is essentially located "on-network." Thus, competitive providers could absorb a majority of U S WEST's high capacity demand almost immediately, incurring only minimal costs.

Moreover, as the attached report prepared by PEI demonstrates, competitive providers would not incur significant costs to extend their fiber networks to absorb the vast majority of U S WEST's current high capacity demand. Specifically, competitive providers in Phoenix can serve the almost 50 percent of U S WEST's high capacity customer locations within 1,000 feet of their existing fiber networks – which accounts for approximately 86 percent of U S WEST's current high capacity demand in the Phoenix area – if they invest $45 million.[35] In addition, competitive providers can serve all of U S WEST's high capacity customer locations within 9,000 feet of their existing fiber networks – which accounts for more than 95 percent of U S WEST's current high capacity demand in the Phoenix area – if they invest approximately $127 million.[36] As wireless technology continues to develop, high capacity fixed wireless alternatives will provide an alternative, low cost means of expanding these competitive fiber backbone networks.[37]

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[35] Exhibit KAS-3, PEI Report at 3. Exhibit KAS-5 hereto is a map showing competitive provider coverage of U S WEST's DS1 equivalent services, including a buffer area within 1,000 feet of existing competitive provider fiber networks.

[36] Exhibit KAS-3, PEI Report at 3.

[37] Id.

Q. CAN YOU PUT THESE INVESTMENT AMOUNTS IN PERSPECTIVE WITH THE CURRENT U S WEST REVENUES FOR HIGH CAPACITY SERVICES?

A. Yes. To put these figures into perspective, Kahn and Tardiff observe that U S WEST's current high capacity customers generate about $50 million of revenue annually in direct charges for high capacity facilities.[38] This means that, based on plausible assumptions, the investment necessary to serve all that current business would be about 2.7 times revenues – a multiple "markedly lower" than U S WEST's current investment to revenue multiple of 3.2 for Arizona.[39] The investment ratios required for competitive providers to reach those customers located within 1,000 feet of the providers' existing fiber networks would be even more favorable.[40]

The investment to revenue comparisons are somewhat hypothetical exercises for considering whether competitive providers would find it economical to expand their networks to serve U S WEST's existing high capacity demand if it were to become available.[41] As such, the comparisons do not take into account the lost economies of scale and density that competitive providers would likely experience if they expand selectively to serve high volume/low cost locations.[42]

On the other hand, Kahn and Tardiff state that focusing on scale economies sacrificed by targeting customers actually understates the attractiveness of serving current U S WEST high capacity locations, for two reasons.[43] First, because the high capacity market is growing, competitive providers can realize economies of scale by serving the incremental demand in addition to demand

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[38] Id.

[39] Id.

[40] Id.

[41] Id.

[42] Id.

[43] Id. at 14.

captured from U S WEST.[44] Second, it is important to recognize that the revenue figures only reflect payments for the use of the high capacity facilities – as such, they do not take into account the fact that competition increasingly involves the provision of a package of services (i.e., one-stop shopping).[45]

Competitive providers that obtain access to a customer through their high capacity business have a vehicle for obtaining access to other higher margin services. This means that competitors may be willing to under-price their high capacity services in order to "capture" the customer. Taking the net revenues from bundled services into account would make the investment to revenue comparisons "markedly more favorable" according to Kahn and Tardiff.[46]

Q. HOW QUICKLY COULD CURRENT COMPETITORS EXPAND THEIR FACILITIES TO MEET NEW DEMAND?

A. PEI estimates that competitive providers can serve the 50 percent of current U S WEST-served locations that are within 1,000 feet of the providers' existing fiber networks in 18 to 24 months.[47] Kahn and Tardiff find that this time frame is "very significant" and consistent with the time frame envisioned in the Merger Guidelines for determining whether prospective new investments should be counted as a competitive presence disciplining the pricing behavior of firms contemplating a merger.[48]

Although serving those customers beyond 1,000 feet would require additional time, the competitive providers' ability to do so is competitively significant, since this is a real constraint on the ability of

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[44] Id.

[45] Id. For example, ELI's President and Chief Operating Officer Dave Sharkey stated in a news release dated May 4, 1998: "We are witnessing the success of our bundled service strategy, as nearly 60% of our customers purchased multiple products and services." PR Newswire Association, Inc., May 4, 1998.

[46] Exhibit KAS-1, Kahn and Tardiff Paper at 14.

[47] Exhibit KAS-3, PEI Report at 3.

[48] Exhibit KAS-1, Kahn and Tardiff Paper at 14-15

U S WEST to control pricing in the marketplace. If U S WEST were to attempt a significant increase in prices, the competitive providers would begin contacting customers with lower price offers to expand their networks, and the customers in turn would not renew contracts with U S WEST.

Q. IS THE COST OF ENTRY PROHIBITIVE FOR COMPETITORS TO PROVIDE HIGH CAPACITY SERVICE IN PHOENIX?

A. No. The impressive growth of competitive provider's market share in the Phoenix area market for high capacity services demonstrates that the cost of entry is not prohibitive.[49] This is reflected in the tremendous growth in the number and size of competitive providers nationwide. In addition, competitive providers have been attractive takeover targets and are having no trouble attracting large amounts of capital in the financial market. For example, ELI went public in November 1997 and raised $128 million in its equity offering.[50] Kahn and Tardiff note that, in the two years since the passage of the 1996 Act, competitive providers have raised $14 billion of outside capital, whereas total annual investment by incumbent LECs has been about $18 billion.[51]

Q. ARE THERE LEGAL BARRIERS TO ENTRY FOR COMPETITIVE PROVIDERS?

A. No. As mentioned above, there are no legal barriers to entry.[52] Competitive providers have other market entry options in those areas where they choose not to deploy facilities. With the adoption of the 1996 Act, Congress implemented a comprehensive system of market-opening provisions that benefit both facilities-based carriers and pure resellers. This flexibility allows competitive providers to increase their market presence through resale beyond the reach of their existing fiber networks.

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[49] Id.

[50] ELI also has a $400 million credit line, guaranteed by its parent company, Citizen's Utilities, which has an A+ rating with Standard & Poors. Citizen's other securities carry ratings that range from AA- to AA+.

[51] Exhibit KAS-1, Kahn and Tardiff Paper at 16-17.

[52] Compare Comsat Reclassification Order at ¶ 82.

It also allows them to increase their market share more quickly than would be possible solely through expansion of their own networks.

Q. DOES U S WEST HAVE A COST STRUCTURE, SIZE AND RESOURCE ADVANTAGE OVER CURRENT COMPETITORS?

A. No. U S WEST does not enjoy any such advantage in the Phoenix area market for high capacity services. U S WEST faces well-funded and established facilities-based competitors in Phoenix. Publicly available financial and company profile information also demonstrates the size and power of the competitive entrants and leads to the inescapable conclusion that U S WEST is a far smaller player than either AT&T/TCG or MCI WorldCom. It also demonstrates that the other competitors are large well-funded companies, as the following chart demonstrates.

Company	Revenues	Growth	Total Employees
MCI WorldCom	third quarter 1998 revenues were $7.7 billion	16% higher than third quarter 1997	80,000 people
AT&T/TCG	AT&T's third quarter 1998 revenues were $13.65 billion[53]	a 4.3% increase over the same period in 1997	128,000 people
U S WEST	third quarter 1998 revenues were $3.1 billion	a 5.1% increase over the same period in 1997	48,000 people

Q. SINCE THE INTRODUCTION OF COMPETITIVE PROVIDERS HAVE THE PRICES FOR HIGH CAPACITY SERVICES DECLINED?

A. Yes. In fact, when the first competitive providers entered the high capacity services market in the late-1980s, prices for high capacity services were approximately twice their current levels.[54] The fact that competitive activity in the market is accelerating while prices for services are dropping is a strong indication that investors do not believe incumbents have an insurmountable cost advantage in the market.[55]

[53] At the same time, its $1.9 billion in net income for the quarter was $700 million more than its profits in the third quarter of 1997, an increase of 68%.

[54] Id. For example, U S WEST's rates for DS1 service fell by 43% from 1989 to 1998. Id.

[55] Id. at 17-18.

According to the Kahn and Tardiff Paper, the continued feasibility and vitality of competitive entry in the Phoenix area market for high capacity services is shown by the fact that the rapid expansion of competitive entry has occurred at the same time as incumbent charges for high capacity services have substantially declined.[56]

Q. DOES U S WEST HAVE THE ABILITY TO EXERCISE MARKET POWER IN THE PHOENIX MARKET FOR HIGH CAPACITY SERVICES?

A. No. In particular, Kahn and Tardiff rely on the following market characteristics: (1) U S WEST has a diminishing market share, serving only 30 percent of the retail market and providing barely half of the facilities that serve new demand; (2) customers (e.g., large businesses and other carriers) are highly sensitive to price and other service characteristics; (3) U S WEST's competitors have the ability to expand their facilities and capture U S WEST's existing business, and there are minimal barriers to entry; and (4) U S WEST's size does not provide it an insurmountable advantage.[57]

SERVICE DESCRIPTIONS

Q. WHAT SERVICES IS U S WEST PROPOSING TO DEREGULATE?

A. U S WEST proposes to deregulate the following digital high capacity services: DS1 and DS3 transport services (including Switched Access transport), Frame Relay Service (FRS), ATM Cell Relay Service (ATM CRS), LAN Switching Services (LSS), Transparent LAN Service (TLS), and Megabit Services.

Q. ARE THESE SERVICES NECESSARY TO PROVIDE UNIVERSAL TELEPHONE SERVICE IN ARIZONA?

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[56] Exhibit KAS-1, Kahn and Tardiff Paper at 17.

[57] Id. at 20.

A. No. These competitive high capacity services are not the same as basic telephone services that are necessary to insure universal service objectives in Arizona.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE PROVIDING THESE, OR CAN PROVIDE SIMILAR SERVICES, IN ARIZONA?

A. Yes. Attached in Exhibit KAS-6 are examples of web pages and public announcements about our competitor's abilities and willingness to provide high capacity services in Arizona. In addition, our sales organization in Arizona continues to receive copies of competitive bids from our customers inquiring if we can meet or beat the competitors price or terms and conditions. Several examples have also been included in Exhibit KAS-6. U S WEST is unable to obtain market share information such as the number of customers or circuits sold by competitors because it is not publicly available.

Q. WHAT IS DS1 SERVICE?

A. U S WEST DS1 Service provides for the two-way transmission of 1.544 Mbps digital signals, on a point-to-point basis only. DS1 Service can be provisioned on copper, fiber, or other suitable facilities. DS1 Service may be used for the transmission of voice, data, and video signals, or any combination thereof. DS1 Service is provided between two customer designated premises, between a customer designated premises and a company serving wire center, or between company serving wire centers.

DS1 transport also provides the transport facilities for Primary Rate Integrated Digital Services Network (ISDN) service, Digital Switched Service (DSS) and Switched Access Transport.
U S WEST is not requesting deregulation of the switching and trunking portions that make these unique services, but rather the common underlying DS1 transport facilities.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CAPABLE OF PROVIDING DS1 SERVICES?

A. Yes. Exhibit KAS-2 demonstrates that many providers in the Phoenix MSA have DS1 services. In addition, attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing DS1 service. For example, AT&T/TCG, ELI, GST and MCI WorldCom all advertise the availability of DSI services. The AT&T/TCG web page describes a wireless DS1 alternative called OmniWave Services. In addition, in Exhibit KAS-6, are examples of competitive bids that have been provided to U S WEST customers by various companies about their ability to provide DS1 service[58]

Q. WHAT IS DS3 TRANSPORT SERVICE?

A. U S WEST DS3 Service provides a high capacity channel for the transmission of 44.736 Mbps isochronous serial data having a line code of bipolar three zero substitution (B3ZS). DS3 Service is provided between customer designated premises, between a customer designated premises and a Company Hub or between Company Hubs. DS3 Service is available utilizing an electrical or optical interface.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CAPABLE OF PROVIDING DS3 SERVICES?

A. Yes. Exhibit KAS-2 discusses DS3 providers in the Phoenix MSA. In addition, attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing DS3 service. For example, AT&T/TCG, ELI, GST and MCI WorldCom all advertise the availability of DS3 services. In addition, the AT&T/TCG web page describes a wireless DS3 alternative called OmniWave Services.

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[58] DS1 and T1 service are technically the same service.

Q. WHAT IS FRAME RELAY SERVICE?

A. Frame Relay Service (FRS), often referred to as "fast packet", is a modified form of packet switching technology. It is used for high-speed data transfer among Local Area Networks (LAN) and host computers at speeds of 56 kbps, 1.544 Mbps, and 44.736 Mbps. FRS uses the public data network to create "virtual private lines" that connect multiple sites.

FRS differs from conventional packet switching in that it relies on Customer Premises Equipment (CPE) to perform the functions of error recovery and flow control between each node. In contrast, conventional packet switching performs the error recovery and flow control functions. The result of FRS performing these functions is higher throughput and lower delay because much of the network's overhead is eliminated.

FRS ports are the physical entry points for Access Links. They are also the originating and terminating points for Permanent Virtual Circuits (PVCs). PVCs are provisioned on either 56/64 Kbps, 1.544 Mbps, or 44.736 Mbps ports, depending on the customer's data networking requirements.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CURRENTLY PROVIDING FRAME RELAY SERVICE?

A. Yes. Attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing Frame Relay Service. For example, AT&T/TCG, ELI, GST, MCI WorldCom and e.spire all advertise the availability of Frame Relay services. Specifically, GST and e.spire provide Frame Relay Service in Tucson. In addition, Exhibit KAS-6 contains an example of WinStar's offer to provide a private Frame Relay network between Yuma, Phoenix and Tucson.

Q. WHAT IS ATM CRS?

A. U S WEST's ATM CRS is a connection-oriented communications service that uses Asynchronous Transfer Mode (ATM) technology. ATM CRS provides customers with a fast-packet (cell) switched service that responds to customer needs for high speed, low-delay information transfer to support applications that require near-real-time mixed media (data, video, image, voice) communications among multiple locations. ATM CRS allocates band width to applications and users as needed. This allocation supports "bursty" applications that place high short-term demands on the network but do not justify dedicated lines, and customers are billed only for the capacity they use.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CURRENTLY PROVIDING ATM SERVICE?

A. Yes. Attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing ATM service. For example, AT&T/TCG, ELI, and MCI WorldCom all advertise the availability of ATM services in Phoenix. In addition, AT&T, ICG and e.spire provide ATM service in Tucson.

On a national level, Sprint, AT&T/TCG and MCI WorldCom have the highest market share, ranging from 17% to 26% of total revenues. MCI WorldCom and Sprint have the highest number of ATM CRS connections, which represent 29% and 14% of total connections, respectively. U S WEST estimates that it has approximately 2% of both ATM revenues and connections.

Q. WHAT IS LAN SWITCHING SERVICE (LSS)?

A. LSS is a metropolitan-area and wide-area LAN interconnection service, which utilizes ATM technology to provide customers with native speed LAN interconnection. LSS provides a specific amount of bandwidth and supports both point-to-point and multipoint (shared) connectivity of Ethernet connections at 10 Mbps, Fast Ethernet Lite at 45 Mbps, and Fast Ethernet at 100 Mbps.

LSS also provides token Ring LAN interconnection at 16 Mbps. LSS is provided over 45 Mbps and 155 Mbps fiber optic facilities. LSS can only transmit data at this time.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CAPABLE OF PROVIDING LSS SERVICE?

A. Yes. Attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing LAN switching and ATM service. Therefore, it is reasonable to assume they can provide a replacement product for the U S WEST LSS service. For example, AT&T/TCG, ELI, and MCI WorldCom all advertise the availability of ATM and LAN switching services.

Q. WHAT IS TRANSPARENT LAN SERVICE (TLS)?

A. Transparent LAN Service (TLS) is a high speed (1.544, 4, 10 or 16 Mbps), shared fiber optic transport service for the interconnection of Local Area Networks (LANs). TLS serves as a basic LAN extension for either Token Ring or Ethernet LANs. TLS provides a virtual private circuit that utilizes public transport.

It is provided only over fiber optic facilities, and can be provided on a point-to-point or, in certain instances, multipoint basis, depending on how the data links are used by the customer. TLS has working (primary) and protect (secondary) pairs of fibers for reliability. Should the primary fiber facilities fail, the service automatically switches to the secondary path fiber facilities in order to maintain a near continuous flow of data between locations.

Q. DO YOU HAVE ANY EVIDENCE THAT COMPETITORS ARE CAPABLE OF PROVIDING TLS SERVICE?

A. Yes. Attached in Exhibit KAS-6 is publicly available marketing information that shows several competitors in Arizona are providing TLS service. For example, AT&T/TCG, ELI, and MCI

WorldCom all advertise the availability of TLS services. In addition, the studies in the Phoenix area indicate that many competitors have fiber rings already installed.

Q. WHAT IS MEGABIT SERVICE?

A. MegaBit Service is the umbrella name for U S WEST's family of managed services delivered to a subscriber location on DSL (Digital Subscriber Line) technology. MegaBit Service provides the capability for simultaneous voice and high-speed data services over a single copper wire pair. (Data is separated at the serving central office and then connected to a high-speed fiber network and delivered to the host destination.)

MegaBit Service involves two service categories: MegaCentral and MegaSubscriber. These two categories correspond to the "hub" and "spoke" nature of the service architecture. The MegaCentral location is the hub (or host), and each MegaSubscriber is a spoke. One MegaCentral location will serve multiple MegaSubscribers. Each of the spoke connections must be associated with a host.

Q. CAN YOU PROVIDE MORE DETAIL ABOUT MEGASUBSCRIBER SERVICE?

A. Yes. MegaSubscriber service uses DSL technology to transport a high capacity data stream over a single pair of copper wires along with Plain Old Telephone Service (POTS). A customer must have or purchase a POTS line, and MegaBit MegaSubscriber service rides on top of the POTS line; i.e., MegaBit MegaSubscriber Service does not include a POTS line.

Q. CAN YOU PROVIDE ADDITIONAL DETAIL ABOUT MEGACENTRAL SERVICE?

A. Yes. MegaCentral is the "hub" of the "hub and spoke" network. As previously discussed, MegaSubscriber is the spoke and each MegaSubscriber connection must be matched with a MegaCentral connection.

The MegaCentral service is provided to small businesses, corporations or Internet Service Providers (ISP), allowing them to aggregate data streams from many MegaSubscribers onto a single high-speed data connection. An example of such an arrangement is a group of telecommuters that would each have a spoke network connection that is associated with the corporation's hub connection. MegaCentral customers will have the option of purchasing multiple MegaCentral links that may be used to increase available bandwidth, for load sharing functions, or as backup connectivity in the case of primary link failure.

Q. DO CUSTOMERS HAVE ALTERNATIVE SERVICES AVAILABLE TO MEET THEIR NEEDS?

A. Yes. Customers have alternatives from both U S WEST and other competitors. Alternatives include: ISDN service, Frame Relay Service, ATM CRS, private line transport services. In Phoenix specifically, Speed Choice is heavily promoting a wireless broadband alternative to U S WEST's Megabit service. Additionally, cable modem placement is growing. Cable modems are becoming realistic alternatives for business and residential customers, and are among the main competitors to data services offered on DSL technology.

Q. WHAT ARE CABLE MODEMS?

A. Cable modems are data devices using embedded cable television infrastructure. The coaxial cable coming into the home has the potential of supporting up to 750Mhz of broadcast media, data, audio etc. Many of the cable operators have elected to set aside one or two channels within the distribution infrastructure to support the use of data modems. For example, in Exhibit KAS-6, is a copy of the Cox Communications' web site promoting their new cable modem services "Cox @ Home" and "Cox @ Work", as now available in parts of Phoenix.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

EXHIBITS OF

KAREN A. STEWART

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

Kahn and Tardiff Paper

ECONOMIC EVALUATION OF HIGH CAPACITY COMPETITION IN PHOENIX

Alfred E. Kahn and Timothy J. Tardiff

EXECUTIVE SUMMARY

U S WEST Communications is requesting, under Section 10 of the Telecommunications Act of 1996, that the Federal Communications Commission forebear from regulating it as a dominant carrier in its sale of high capacity services in the Phoenix metropolitan area. In support of its Petition the Company has asked us to assess its market power in the offer of these services in that area. In performing this analysis, we rely on information about that market obtained from studies performed by others (Quality Strategies and POWER Engineers), on data provided by the Company, and on our own primary and secondary research on this and related markets.

Following the approach the FCC has previously used to assess market power for other services, we conclude that the market for high capacity services in the Phoenix area fully exhibits the indicia of competition that the Commission has prescribed. In particular, (1) U S WEST has a diminishing market share—indeed, it serves only 30 percent of the retail market—and is barely providing one-half of the facilities that serve new demand; (2) customers are highly sensitive to price and other service characteristics; (3) U S WEST's competitors have the ability to expand their capacity sufficiently to take over a major share of the market currently served by U S WEST and there are minimal barriers to entry; and (4) U S WEST's size does not confer on it an insurmountable competitive advantage.

August 14, 1998

U S WEST's lack of market power signifies that competition itself, without dominant firm regulation, is sufficient to limit its ability to impose anticompetitive prices and other conditions of service. In light of these developments, the costs of maintaining dominant firm regulation in this market clearly exceed whatever benefits continued regulation could possibly confer.

I. INTRODUCTION

U S WEST Communications is requesting, under Section 10 of the Telecommunications Act of 1996, that the Federal Communications Commission forebear from regulating it as a dominant carrier in its sale of high capacity services in the Phoenix metropolitan area. In seeking nondominant status for these services, the Company argues that competitive entry, along with the competition to which it is already subject, is sufficient to constrain its ability to charge prices above competitive levels and, therefore, the costs of continued dominant carrier regulation far outweigh the benefits.

U S WEST has asked us to assess its market power in the offer of these services in Phoenix. In performing this analysis, we rely on information about that market obtained from studies performed by others (Quality Strategies and POWER Engineers), on data provided by the Company, and our own primary and secondary research on this and related markets. We follow the framework the FCC has used in determining nondominant status in other situations.[1] We conclude that competition in this particular market is sufficiently strong to constrain U S

WEST's ability to control prices and other terms and conditions of service, and that continuing dominant-firm regulation of its high capacity services would be anti-competitive and injurious to consumers.

II. THE FCC'S APPROACH TO MARKET POWER ASSESSMENT

The FCC employs standard economic concepts in its assessment of a firm's market power.[2] It first defines the relevant product and geographic market, taking into account both demand and supply substitution. It then determines whether a firm currently regulated as a dominant carrier still possesses monopoly power within that market, by examining four specific measures:[3] (1) market share, (2) demand elasticity, (3) supply elasticity and (4) the cost structure, size and resources of the putatively dominant firm. We proceed to analyze each of these in turn.

A. Market Definition

Services provided to customers with usage sufficiently great to be economically served with high capacity facilities[4] define the relevant product market.[5] These customers would be

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[1] See, for example, *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, October 12, 1995 ("AT&T nondominance order") and *Policies and Rules for Alternative Incentive Based Regulation of Comsat Corporation*, IB Docket No. 98-60, April 24, 1998.

[2] Cf., e.g., the methods employed by the antitrust agencies for defining markets when analyzing proposed mergers. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, April 2, 1992.

[3] These measures are similar to those described in W.M. Landes and R.A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review*, 1981.

[4] These include DS-1 or higher capacity facilities.

mid-sized to large business end-users,[6] carriers using high capacity transport facilities. and resellers. Services provided over lower-capacity facilities are not in the same product market and are not encompassed by the U S WEST petition: in terms of the familiar standard of the *Merger Guidelines*, customers of these services would not shift their demands to high capacity facilities in response to a "small but significant" increase in the price of their current services, because the monthly cost of hooking them up for that kind of access is as much as six to seven times their current basic monthly charges.[7] Because, for this reason, high-capacity access to large users and low-capacity access to small users are not substitutable on the demand side, the smaller users are in a separate product market.[8]

In terms of supply substitutability, the market clearly embraces all local exchange companies, incumbent and competitive, as well as competitive access providers. There seems no reason to doubt that all of them are capable of providing service to the high-capacity market.

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[5] Over ten years ago, one of us applied a similar analysis to conclude that high capacity services were competitive in New York City. J.A. Hausman, T.J. Tardiff, and H. Ware, "Competition in Telecommunications for Large Users in New York," in National Economic Research Associates, *Telecommunications in a Competitive Environment*, Proceeding of the Third Biennial Telecommunications Conference, Scottsdale. Arizona, April 1989, pp. 1-19. Our study was based on testimony presented to the New York Public Service Commission. At the conclusion of that case, the Commission ordered that, with the implementation of collocation and the unbundling of switching and transport, New York Telephone be granted a wide range of pricing flexibility—the ability to raise rates by 25 percent annually and to lower them to incremental cost—for its high capacity dedicated services. New York Public Service Commission, Proceeding on Motion of the Commission to Review Regulatory Policies for Segments of the Telecommunications Industry Subject to Competition, Case 29469, Opinion No. 89-12, May 16, 1989. While New York was the first city in which local exchange competition took root, competition is more prevalent in Phoenix today than it was in New York when we performed our study.

[6] For ultimate customers, the distinction between mid to large businesses and smaller users corresponds roughly to locations with enough demand to justify a PBX.

[7] U S WEST's current price for a DS-1 facility is about $270 per month.

[8] *Horizontal Merger Guidelines*, Section 1.11.

A practical delineation of the geographic scope of the market for high capacity facilities from the supply side is the metropolitan area. New entrants often announce the availability of their services on this basis. In addition, this tends to be the area within which a provider can expand in a timely fashion to offer services to a growing number of locations. For this particular examination, POWER Engineers (PEI) have shown that competitive local exchange carriers in Phoenix can economically expand to serve almost half of the locations of U S WEST's present high-capacity customers within two years.[9]

B. Market Power Assessment

In this section, we undertake the four assessments performed by the FCC.

1. Market Share

According to Quality Strategies,[10] five competitive providers,[11] all of them with regional or national presence, have entered the high-capacity market in Phoenix since 1994—MFS-WorldCom, TCG, ELI, GST, and MCIMetro. MFS and TCG are the oldest and largest CLECs in the country. With its proposed merger with MCI, MFS-Worldcom would become affiliated

[9] POWER Engineers, *Phoenix Fiber Study*, Prepared for U S WEST, August 13, 1998. Specifically, PEI estimated the cost of expanding CLEC networks to serve all U S WEST locations within 9,000 feet of those networks. These locations account for approximately 95% of all U S WEST's current high capacity demand in the Phoenix area.

Demand tends likewise to be location-specific. Although the size of the consumer base in the several metropolitan areas of the country (indeed, the world) tends to be responsive to, among other things, the availability and cost of high-tech telecommunications facilities, we would not contend that this source of demand elasticity at any particular location sufficiently constrains possible monopoly power at that location to justify broadening the definition of the market to include suppliers of comparable services elsewhere: we accept the obligation to demonstrate that competitive sources of supply must be sufficiently available, both actually and potentially, in Phoenix itself to justify our support for the U S WEST petition.

[10] High-Capacity Market Study—Phoenix MSA, Prepared for U S WEST, August 7, 1998.

with the second largest long-distance carrier. Similarly, AT&T recently completed its acquisition of TCG, the second largest national CLEC. These transactions involve the merger of the purchasers of approximately half of U S WEST's high capacity services (e.g., carriers purchasing access) in Phoenix with suppliers that compete directly with U S WEST. It would be difficult to conceive of a more substantial consequent diminution of whatever market power that company might previously have enjoyed.

The Quality Strategies report measured market share in a number of ways.[12] In terms of overall high capacity services, U S WEST provides 77 percent of total facilities—whether directly to customers or to other carriers—CLECs the other 23 percent. U S WEST's share is lower than that for facilities provided to end users (72 percent), but higher for IXC transport (84 percent).

What these still-high market shares conceal is the fact that competitors of U S WEST have already taken over the preponderant share of the retail market—both using U S WEST's facilities and, as we will point out, increasingly using their own. In terms of direct sales to retail end users, U S WEST's share of the high-capacity market is below 30 percent, according to this same study.[13]

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[11] For purposes of our discussion, we do not distinguish between competitive local exchange carriers (CLECs) and competitive access providers (CAPs).

[12] Unless otherwise indicated, its estimates are for the fourth quarter of 1997.

[13] A large proportion of U S WEST's high-capacity facilities are provided to other carriers, who then resell the capacity to end use customers. For example, interexchange carriers, such as AT&T, MCI and Sprint, use U S WEST special access facilities when providing certain services to their high-volume customers.

In addition to the level of the current market share of competitive providers, recent changes in that share as well as growth in the market overall[14] are germane to the assessment of market power. Both of these strongly suggest that the Phoenix high capacity market is increasingly competitive. The market overall has been growing recently at about 13 percent annually.[15] Expansion of the CLECs' business has been even more rapid. During the period from the fourth quarter of 1994 to the fourth quarter of 1997, their share of facilities provided to end users increased from 6 percent to 28 percent; and their share of total transport carriage has grown much more dramatically—from 5 to 16 percent in the half-year between the second and fourth quarters of 1997.[16] This means, as a matter of simple arithmetic, that their shares in the *incremental* business in this rapidly growing market must have been much greater than that. According to the Quality Strategies report (p. 15), CLEC facilities are getting 54 percent of the growth in demand of end-users (whether directly or through a reseller), and they are providing 42 percent of the growth in transport with their own facilities.

The strong recent growth in CLEC sales and market share is likely to continue and may even accelerate. While we do not have Company-specific data for Phoenix, CLECs expect to more than double their sales nationally in 1998, with the bulk targeted, as heretofore, at

[14] In general, the more rapidly a market is growing, the easier entry is likely to be, other factors being equal. See, for example, G.J. Stigler, *The Theory of Price*, Fourth Edition, New York: McMillan, 1987, pp. 209-210.

[15] This rate of growth would produce a doubling of demand in about 5½ years.

[16] These growing shares in a growing market of course imply an even higher growth rate for CLEC volumes. CLEC circuits provided to end users grew by about one-third during 1997, while the CLEC transport volume *almost tripled* in the last half of 1997.

business customers. In fact, during the first quarter of 1998, CLECs added absolutely more new business lines in the U.S. than the RBOCs.[17]

A comparison of the Phoenix market share information with the situation the FCC considered when it granted AT&T nondominant status for interstate long-distance is informative. The FCC reported a market share of about 60 percent for AT&T in 1993.[18] Over the previous five years it had fallen by fewer than 10 percentage points.[19] While AT&T's revenues were essentially flat over the 1988 to 1993 period, the overall market was growing by about 5 percent per year and the revenues for carriers other than AT&T at about 15 percent annually.[20]

This comparison of markets at the time of their respective nondominance investigations thus reveals that while U S WEST's current market share at the wholesale, facilities level is higher than AT&T's at the time when the FCC found it non-dominant, its share at the retail level is much much lower: we doubt there would be economists prepared to refer to a firm with 30 percent of a retail market as "dominant." Moreover, at both wholesale and retail levels, the shares and the volumes of business of U S WEST competitors are growing at a considerably more rapid rate than were those of AT&T's competitors at that time. Since we believe the consensus of economic opinion would be to place greater emphasis on changes in market shares over time and shares in incremental business than their absolute levels, we believe the

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[17] See statement of Heather Gold, *FCC En Banc on State of Local Competition*, January 29, 1998 and Salomon Smith Barney "CLECs Surpass Bells in Net Business Line Additions for the First Time," May 6, 1998.

[18] AT&T nondominance order, par. 40.

[19] Federal Communications Commission, *Trends in Telephone Service*, February 1998, Table 11.1.

[20] *Ibid.*, Table 11.6.

consensus conclusion would be that U S WEST has much the stronger of the two cases for its claim of a lack of market power in the Phoenix high capacity market.

In fact, market shares considerably smaller than that of the CLECs in Phoenix have been considered competitively significant. For example, in its AT&T nondominance order, the FCC adduced in support of its conclusion (par. 62) the fact that long-distance resellers, with a market share of about 12 percent, could attract new customers sufficiently to constrain AT&T's ability to charge supracompetitive prices. Hubbard and Lehr go even further in concluding that these resellers had sufficient market presence to discipline AT&T, MCI and Sprint, combined.[21] Of course, the 1996 Telecommunications Act explicitly promotes this form of competition via its mandatory unbundling and resale provisions.

2. Demand Elasticity

In granting nondominant status to AT&T, the FCC observed that the demands of business customers are highly elastic, because they are sophisticated buyers who typically receive and consider alternative proposals from several vendors.[22] That observation clearly applies at least equally to the segment of the business customer market that purchases high capacity services and facilities—medium to large businesses and other carriers.

[21] Affidavit of R. Glenn Hubbard and William H. Lehr, on behalf of Western Electric Company, Inc., and American Telephone and Telegraph Company, United States District Court for the District of Columbia, Civ. No. 82-0192 (HHG), filed December 5, 1994, Attachment 1: "An Analysis of Competition in U.S. Long-Distance Telephone Service," pp. 5-6. While we have disagreed with Hubbard and Lehr about the adequacy of competition in the long-distance business in protecting small residential purchasers of long-distance services, we have not disagreed at all about the effectiveness of competition in serving large customers and in appraising the role of resellers in that competition.

[22] AT&T nondominance order, par. 65.

In support of its motion for nondominant status, AT&T submitted an assessment by Professor Michael Porter of the competitiveness of the long-distance market.[23] He found that business customers have considerable negotiating power because of their sophisticated knowledge of telecommunications, their use of network outsourcers and their ability to provide their own networks. These factors are even more powerful in the case of high capacity services, because among the primary users of these services are other carriers that have both the incentive and the ability to drive a hard bargain for good prices and service by threatening to go elsewhere. One need look no further than the alliances between the major IXCs and CLECs (such as Worldcom/MCI/MFS, AT&T and TCG) to observe the ability of these buyers to seek good deals and/or self-provide by shifting their patronage to their affiliated CLECs.[24]

These factors are further reinforced by the already large share of U S WEST's competitors in the *retail* market. It means that even though they rely heavily on U S WEST actually to provide the high capacity facilities that they then resell to ultimate customers, they are not in this market handicapped by the typical inertia of residential customers, their reluctance to drop their familiar, historical supplier and shift to an unfamiliar retail competitor.

As for the elasticity of substitution between the offerings of U S WEST and its challengers, the rapid growth in the latter companies' share of the business speaks eloquently in

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[23] Michael E. Porter, "Competition in the Long-Distance Telecommunications Market," September 1993. The AT&T nondominance order, par. 64, cited this study when concluding that demand elasticity considerations supported the conclusion that AT&T is nondominant in long-distance.

[24] Quality Strategies, pp. 23-24.

support of the expressions of confidence by CLECs, with which the trade press abounds[25]—a confidence confirmed by a disinterested observer:

> CLECs will be hitting their stride as marketing machines during 1998. ...If 1996 was a year of regulatory maneuvering, and 1997 has been a year of preparation, then 1998 will surely be the first year in which CLECs demonstrate their ability to take market share away in a big way.[26]

The CLEC's ability to take market share from incumbent providers is based, in part, on their offering of sophisticated new services that use these high capacity facilities,[27] bundled into a complete offering of telecommunications services. Incidentally, as this last consideration suggests, the CLECs have one great advantage over RBOCs like U S WEST, so long as the latter companies continue to be subject to the prohibition of their offering inter-LATA services, a restriction from which the CLECs are of course free.

3. Supply Elasticity

The analysis of supply elasticity involves an appraisal of (1) the capability of current competitors that are considered nondominant to expand operations to absorb demand currently served by the incumbent carrier and (2) the presence or absence of entry barriers.[28]

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[25] For example, the CEO of Intermedia boasted that "CLECs have proven they can easily take market share from incumbents." *Telco Business Report*, December 8, 1997, pp. 1-3.

[26] *Ibid.*

[27] For example, e spire (formerly ASCI), a CLEC operating in the southeastern United States, recently announced a high capacity product, targeted to small to medium business, which in the words of one of its executives is "the [RBOCs] worst product nightmare." *Telephony*, March 30, 1998, p. 7. While e spire is not operating in Phoenix, the types of products that will be successful in the market are likely to be similar across regions. Successful introduction of a new product by a CLEC in one region can be expected to be imitated by other CLECs in other regions.

[28] AT&T nondominance order, par. 57. The FCC focused on the first of these in its decision, apparently because it considered the capacity of the existing competitors alone sufficient.

a. Ability of existing CLECs to expand

The best indicator of the ability of existing CLECs to expand is the fact that they have in fact done so tremendously, both in Phoenix, as we have already described, and nationwide, as we will describe in the next section. The market itself has demonstrated that it is indeed economically feasible for these firms to capture demand, both new volumes and demand currently served by U S WEST, if that Company's performance failed to meet competitive standards.

The question: if customers wanted to shift from U S WEST in response to a price increase, would existing CLECs find it economical to serve them?—can also be answered hypothetically. The studies performed by Quality Strategies and PEI provide two measures that shed light on the subject. First, Quality Strategies estimated that the existing backbone networks of the five facilities-based Phoenix CLECs have more than *ten times* the capacity needed to accommodate the current demand for U S WEST's high capacity services.[29] Further editorial commentary on the significance of this finding for the question of U S WEST's "dominance" would surely be superfluous.

Of course, customers would have to be linked to one or another of those backbone networks if a CLEC were to serve them. To this end, PEI performed a detailed study of the cost of providing that linkage to U S WEST's customers, at successive distances from the CLEC facilities.[30] It revealed that about one-half of U S WEST's high capacity customer

[29] Quality Strategies, p. 29.

[30] The cost model developed by PEI is described in detail in its report: it identified routes between customers and the CLEC networks and then estimated the cost of providing fiber optic cable, the associated support structures and electronics over them.

locations are within 1.000 feet (under 0.2 miles) of a CLEC network and to make such connections to all these customers would require an investment of $45 million and would take no more than two years. To serve all locations within 9.000 feet of CLEC networks would require a total of $127 million and no more than five years.

To put these estimates into perspective, we observe that U S WEST's present high capacity customers generate about $50 million of revenue annually in direct charges for the high-capacity facilities—in effect, for the "dial tone" alone. This means that the investment necessary to capture all that current business would be about 2.7 times revenues—a multiple markedly lower than U S WEST's present investment to revenue multiple of 3.2 for Arizona.[31] Under plausible assumptions, the investment ratios required for CLECs to reach customers located within 1,000 feet of their present networks would be even more favorable.[32]

Of course, these investment to revenue comparisons must be viewed in the context of the hypothetical exercise associated with this attempt to assess supply elasticity: would existing CLECs find it economic to expand to serve existing demand if it were to become available. In reality, these CLECs would most likely expand selectively, in an attempt to target high volume/low cost locations. On the one hand, such targeting could introduce some diseconomies, because it would involve serving less than the total volume considered in PEI's calculations, and thereby sacrifice some economies of scale and density.[33] For example, if

[31] ARMIS data disclose investment (total plant in service) of about $4.31 billion and revenues of about $1.35 billion in 1996.

[32] Almost half of U S West's locations are within 1,000 feet of CLEC backbone networks. These locations account for approximately 86 percent of U S West's high-capacity business (i.e., in terms of DS1 equivalents).

[33] In particular, PEI's study implies three types of scale economies. First, there are cost savings when support structures such as poles and trenches can be shared among several locations. Second, the fiber cable itself is a

CLECs captured only one-half of the volumes at U S WEST's existing locations. the investment to cost ratio for locations within 1.000 feet would be 3.1.[34]

On the other hand, focusing on scale economies sacrificed by targeting customers can only understate the attractiveness of CLECs serving current U S WEST locations. for two reasons. First, because the high capacity market is growing, there will be economies of scale in serving both demand captured from U S WEST and the incremental demand. Second. it is important to recognize that the foregoing revenue figures are the payments by subscribers for the use of the high-capacity facilities only: they are equivalent to the flat monthly fee for "dial tone" service alone. As such, they do not account for the fact that competition is increasingly over a package of services: access to a customer becomes the vehicle for selling services with even higher margins. Taking these net revenues into account would make the comparison of the required investment in high capacity facilities to the revenues it would produce markedly more favorable than is suggested by our previous calculations.

The timeliness with which current competitors can expand their facilities to meet new demand is also important in assessing supply elasticity. In this connection, the estimate that CLECs can serve the 50 percent of current U S WEST-served locations that are within 1.000 feet of CLEC networks in 18 to 24 months is very significant. This two year horizon is consistent with the time frame envisioned in the *Merger Guidelines* in determining whether

fixed cost for each location, because the same fiber can serve all volumes in the relevant range. Third, there are economies of scale in the electronics, i.e., electronic costs increase less than proportionately as additional volume is added at a location.

[34] We chose the 50 percent assumption on the basis of the observation that CLECs are now capturing about one-half of new volumes. Our ratio assumes that their share would be spread evenly over all locations, so that CLECs would still have to build facilities to all of them.

prospective new investments should be counted as a competitive factor disciplining the pricing behavior of firms contemplating a merger.[35]

Even though taking on customers beyond 1,000 feet would require additional time, the CLECs' ability to do so is competitively significant. As the FCC correctly observed in its AT&T nondominance order,

> The issue, however, is not whether Sprint and MCI could and should expand their networks so they can serve all of AT&T's customers within a short time frame. Rather, the issue is whether, in the short term, Sprint and MCI have sufficient available excess capacity to add a significant number of new customers. The evidence shows that Sprint and MCI can add significant numbers of new customers with their existing capacity and add incrementally to this capacity as new customers are added to their networks.[36]

b. Barriers to entry

The impressive growth of CLECs demonstrates that barriers to local exchange entry are obviously not prohibitive.[37] Although high capacity entry came later to Phoenix than other metropolitan areas, CLECs there appear to be catching up to the pace elsewhere. According to Quality Strategies, two CLECs entered in 1994 (ELI and TCG), MFS in 1995, MCI in 1996, and GST in 1997.[38]

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[35] *Merger Guidelines*, par. 3.2.

[36] Par. 60. The FCC also concluded that resellers could expand capacity in response to supracompetitive pricing by AT&T (par. 62)

[37] Although much of the available data on CLEC growth is at the national level and for all local exchange services, it is clear that these firms are focusing on high capacity services. For example, Heather Gold reported that the CLECs had created "the nation's first digital local networks...in direct response to increased customer needs for broadband capabilities and advanced telecommunications solutions," *op .cit.*

[38] Quality Strategies, pp. 19-22 and p. 25.

Nationally, there has been tremendous growth in the number and size of CLECs. Currently, there are over 100 of them[39] and they are adding customers at an impressive rate. For example, Salomon Smith Barney reported that CLECs added 75.000 new business lines in the fourth quarter of 1996—sixty-four percent of that total by the "Big 2" (TCG and MFS). 20 percent by 12 other smaller, explicitly identified carriers. and the other 16 percent by an unidentified group. By the first quarter of 1998, the total CLEC volume of new lines had increased to about 500,000, with the "Big 2" accounting for only one-third. the next 12 for 50 percent, and the remaining small LECs for the remaining one-sixth[40]—testifying to a marked decrease in concentration even among these challengers of the ILECs. Clearly, the market opportunities for CLECs are not only expanding but expanding disproportionately rapidly for the newer entrants among them.

Similarly, CLECs are having no trouble attracting large amounts of capital. These funds have come both from other carriers in the form of acquisitions and from the capital market. For example, over the past two years, WorldCom acquired two CLECs, MFS and Brooks, for a combined price of $16.4 billion—an amount almost identical to what SBC paid to acquire Pacific Telesis. In the first half of this year alone, AT&T has acquired TCG at a cost of $11 billion and recently announced its intent to acquire TCI at a cost of $48 billion. In the two years since the passage of the Telecommunications Act in 1966, CLECs have raised $14 billion

[39] Heather Gold, *op. cit.*

[40] Salomon Smith Barney, *op. cit.*

of outside capital.[41] In comparison. The most recent data reported to the FCC show total annual investment by the ILECs has been about $18 billion.[42]

In addition, the availability of investment capital has been unequivocally demonstrated. The over $14 billion that CLECs have raised since the passage of the 1966 Act—over a period of less than two years—was six times the amount of capital raised in the four years before its passage.[43]

4. Cost Structure

In the AT&T nondominance order, the FCC was concerned that AT&T's size relative to other carriers might give it a significant advantage in terms of scale economies and access to capital. The same question must be raised in the present context. The record we have already summarized supplies the definitive answer: investors are obviously satisfied that incumbents do not enjoy advantages sufficient to make continuing—indeed growing—investment in CLECs unattractive.

What is both highly satisfying from the standpoint of consumers and reassuring about the continued feasibility and vitality of competitive entry is the fact that this rapid recent expansion of the CLECs has occurred at the same time as the charges by incumbents for high capacity services have declined substantially. When the first CLECs entered in the mid- to late 1980s, these prices were over twice their current levels.[44] That CLEC activity is accelerating at

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[41] Statement of Heather Gold, *op. cit.*

[42] Calculated from data reported in the FCC's *Statistics of Communications Common Carriers*.

[43] Heather Gold, *op. cit.*

[44] For example, U S WEST's rates for DS-1 capacity fell by 43 percent between the end of 1989 and the beginning of 1998.

lower price levels is strong indication that investors are not overly concerned about insurmountable cost advantages of the incumbents.

III. THE COST OF MAINTAINING DOMINANT REGULATION OF U S WEST'S HIGH CAPACITY SERVICES

In the AT&T nondominance order (e.g., par. 32), the FCC describes graphically the large social costs of continued asymmetrical regulation: (1) the longer tariff notices imposed on AT&T dampened its incentives to innovate, because rivals could respond to its innovations even before it could actually offer them; (2) these same filing requirements also dampened the regulated company's incentives to reduce prices; (3) the dominant firm's competitors could use the asymmetrical regulatory process to delay and undermine its initiatives; and (4) regulation imposed administrative costs on both the regulated firm and the FCC.

The dominant firm regulation at issue in these proceedings involves the same kinds of costs—if anything, they are compounded by the fact that CLECs are providing complete bundles of services, including interLATA, while the ILECs cannot respond until such time as their 271 applications are successful. Ironically, these applications are being held up pending demonstration that ILEC local markets are sufficiently open to competition!

The upgrading and modernization of the switched public network and the fullest exploitation of its capability of offering a variety of sophisticated and innovative services—which are the central goals of the Telecommunications Act of 1996—depend not just on freeing the telephone companies and all others from restrictions and handicaps on their ability to do so; it also requires offering all parties the full, undiluted incentives of a free market system to undertake the requisite, typically risky investments.

Those incentives are of two kinds. The first is the stimulus of competition itself. The strongest case for substituting the discipline of competition for that of regulation is the superior ability of the former to exert pressures on all producers to be efficient and innovative, if they are to survive, let alone prosper. Outstanding, unequivocal illustrations are the wholesale adoption of hub and spoke operations and the development of computerized reservations systems by the airlines after their deregulation, and the widespread adoption of just-in-time inventory systems made possible only by the freedom of truckers, conferred by their deregulation, to enter into binding contracts with penalties for failure to perform according to stipulated standards.

The second is the self-interest of the telephone companies, freed from continuing restrictions on the services they are permitted to offer. If they are to undertake the risks of investments in innovation, they must see the prospect of retaining the profits of the ones that turn out successfully, symmetrically with their bearing the full costs of the failures. This requires genuine deregulation.

Particularly during the next several years, when competitors in markets formerly protected by regulation will attempt to enter each other's domains in innovative and even unpredictable ways, it is essential that we not weaken the second of these incentives in a misguided effort to strengthen the first. Attempts to micromanage the process of deregulation, we have found in other industries, are more likely to produce distortions than actually to encourage efficient competition.[45] Ultimately, both incentive systems require the shrinking of

[45] Alfred E. Kahn, "Applications of Economics to an Imperfect World," the Richard T. Ely lecture, *The American Economic Review, Papers and Proceedings*, Vol. 69, No. 2, May 1979, pp. 1-13.

regulation and of all such regulatory restrictions to the absolute minimum and entrusting protection of the public to deregulated competition—subject, as always, to the constraints of the antitrust laws.[46]

IV. CONCLUSIONS

Following the approach the FCC has previously used to assess market power for other services, we have concluded that the market for high capacity services in the Phoenix area fully exhibits its stipulated indicia of competition. In particular, (1) US WEST has a diminishing market share—indeed, it serves only 30 percent of the retail market— and is barely providing one-half of the facilities that serve new demand; (2) customers are highly sensitive to price and other dimensions of service; (3) US WEST's existing competitors can readily expand their capacity sufficiently to displace it entirely, if it were to attempt to price monopolistically, and, in addition, barriers to entry are minimal; and (4) U S WEST's size gives it no insurmountable advantage.

Indeed, these indicia show intensifying competition, which strongly suggests that if the FCC grants U S WEST's Petition, there is virtually no likelihood that it will ever regain a dominant position that would call for reregulating its high capacity services. On the contrary, the relevant historical precedents indicate that regulators have little to fear from premature relaxation of regulation in these markets. For example, AT&T's market share has continued to decline since it obtained nondominant status in late 1995.[47]

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[46] See Kahn, *Letting Go: Deregulating the Process of Deregulation*, Michigan State University Institute of Public Utilities, 1998.

[47] Federal Communications Commission, *Trends in Telephone Service*, February 1998.

US WEST's lack of market power signifies that competition itself, without dominant firm regulation, is sufficient to restrain the Company's ability to impose anticompetitive prices and other conditions. In light of these developments, the costs of maintaining dominant firm regulation in this market clearly exceed whatever benefits continued regulation could possibly confer.

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He has been Chairman of the New York Public Service Commission; Chairman of the Civil Aeronautics Board; and Advisor to the President (Carter) on Inflation and Chairman of the Council on Wage and Price Stability.

He received his Bachelor's and Master's degrees from New York University and a Doctorate in Economics from Yale University. Following service in the Army, he served as Chairman of the Department of Economics at Ripon College, Wisconsin. He moved to the Department of Economics at Cornell University, where he remained until he took leave to assume the Chairmanship of the New York Public Service Commission. During his tenure at Cornell, Professor Kahn served as Chairman of the Department of Economics, member of the Board of Trustees of the University and Dean of the College of Arts and Sciences.

Throughout his career, he has served on a variety of public and private boards and commissions including: the Attorney General's National Committee to Study the Antitrust Laws; the senior staff of the President's Council of Economic Advisors; the Economic Advisory Council of American Telephone & Telegraph Company; the National Academy of Sciences Advisory Review Committee on Sulfur Dioxide Emissions; the Environmental Advisory Committee of the Federal Energy Administration; the Public Advisory Board of the Electric Power Research Institute; the Board of Directors of the New York State Energy Research and Development Authority; the Executive Committee of the National Association of Regulatory Utility Commissioners; the National Commission for Review of Antitrust Laws and Procedures; the New York State Council on Fiscal and Economic Priorities; the Governor of New York's Fact-Finding Panel on Long Island Lighting Company's Nuclear Power Plant at Shoreham, L.I.; the Governor of New York's Advisory Committee on Public Power for Long Island; the National Governing Board of Common Cause; and, in 1990, as Chairman of the International Institute for Applied Systems Analysis Advisory Committee on Price Reform and Competition in the USSR.

He has also served as a court-appointed expert in State of New York v. Kraft General Foods, Inc., et al., U.S. Disctrict Court, S.D.N.Y.; Advisor to New York Governor Carey on Telecommunications Policy; and as a consultant to the Attorneys General of New York, Pennsylvania and Illinois, the Ford Foundation, the National Commission on Food Marketing, Federal Trade Commission, Antitrust Division of the Department of Justice, the U.S. Department of Agriculture and the City of Denver on charging and financing of Stapleton Airport.

He has received L.L.D. honorary degrees from Colby College. Ripon College. Northwestern University, the University of Massachusetts and Colgate University, and an honorary D.H.L. from the State University of New York. Albany; he also received the Distinguished Transportation Research Award of the Transportation Board Forum. The Alumni Achievement Award of New York University, the award of the American Economic Association's Transportation and Public Utilities Group for Outstanding Contributions to Scholarship, The Henry Edward Salzberg Honorary Award from Syracuse University for Outstanding Achievement in the Field of Transportation, the Burton Gordon Feldman Award for Distinguished Public Service from Brandeis University, the Wilbur Cross Medal for outstanding achievement (Yale University), The 1997 L. Welch Pogue Award For Lifetime Contributions to Aviation and the 1997 Sovereign Fund Award Honoring Vision, Commitment and Achievement in the Pursuit of Individual Freedom; and was elected to membership in the American Academy of Arts and Sciences and Vice President of the American Economic Association. He has been a regular commentator on PBS's "The Nightly Business Report."

He has testified before many U.S. Senate and House Committees, the Federal Power Commission, the Federal Energy Regulatory Commission and numerous state regulatory bodies.

His publications include *Great Britain in the World Economy; Fair Competition: The Law and Economics of Antitrust Policy* (co-authored); *Integration and Competition in the Petroleum Industry* (co-authored); *The Economics of Regulation*; and *Letting Go: Deregulating the Process of Deregulation.* He has written numerous articles which have appeared in *The American Economic Review, The Quarterly Journal of Economics, The Journal of Political Economy, Harvard Law Review, Yale Journal on Regulation, Yale Law Journal, Fortune, The Antitrust Bulletin* and *The Economist*, among others.

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Dr. Tardiff joined the faculties of the Department of Civil Engineering and the Division of Environmental Studies at the University of California, Davis. He taught undergraduate and graduate level courses in transportation and environmental policy analysis. His research included applications of econometric models of consumer choice to transportation planning problems. Dr. Tardiff's research was funded by the National Science Foundation, the Institute of Transportation Studies and the California Department of Transportation.

Prior to joining NERA, Dr. Tardiff's work included transportation, energy, public utility and telephone industry projects for the U.S. Departments of Transportation and Energy, the California Energy Commission, and several telephone and electric utilities.

Since joining NERA, he has evaluated pricing policies for increasingly competitive telecommunications markets, including appropriate mechanisms for pricing access services to competitors; studied actual and potential competition for services provided by telephone operating companies; analyzed the demand and revenue impacts of new telephone rate structures; developed and evaluated damage studies used in major telecommunications antitrust actions; analyzed the market potential for wireless telephone services; evaluated the investment and marketing programs of telephone companies; and developed approaches for measuring incremental costs of telecommunications. Most recently, he has submitted affidavits, reports and testimony in federal and state regulatory proceedings on the implementation of the Telecommunications Act of 1996: including pricing of unbundled elements, universal service reform, carrier access pricing reform, and interLATA entry.

Dr. Tardiff has published extensively in the transportation literature. He has also presented and published papers on the telecommunications industry, which have appeared in publications such as the *American Economic Review*, *Information Economics and Policy*, and as chapters in several books. These papers address the issues of pricing and costing policies for emerging competition in telecommunications markets; evaluating and forecasting the impacts of telephone rate plans such as local measured service; analyzing the markets for new telecommunications products and services; and the development of competition for local exchange services.

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Affidavit

BE IT KNOWN, that Nickie L. R. Duff, the Undersigned, being of legal age, do hereby depose and say under oath as outlined in the attached document, entitled, "Phoenix Cost Study and Model", which is annexed and incorporated herein:

WITNESS my hand under the penalties of perjury this 13th day of August, 1998.

Nickie L R Duff
Signed

Signed

Signed

Signed

Before me this day personally appeared Nickie L. R. Duff, known to me to be the person described in and who executed this agreement.

WITNESS my hand and official seal at Boise in Ada County in the State of Idaho this 13th day of August, 1998.

Signature Sandra M. Galuca
Notary Public for Idaho
My commission expires 3/7/2000

Quality Strategies Report

U S WEST

HIGH CAPACITY MARKET STUDY

PHOENIX

METROPOLITAN STATISTICAL AREA

August 7, 1998

QUALITY STRATEGIES.

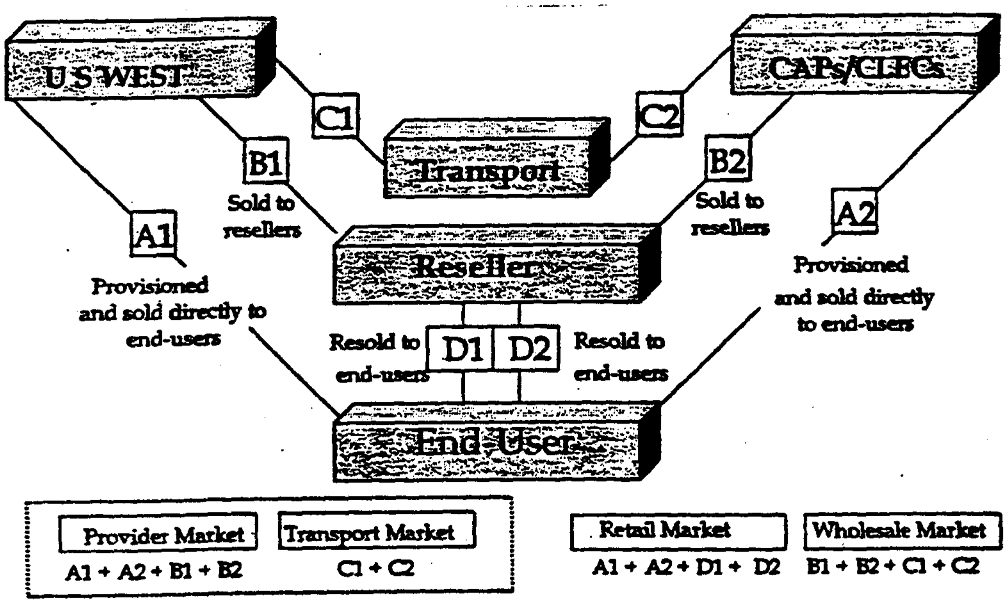
WASHINGTON, D.C.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report analyzes the state of competition in the market for high capacity telecommunications services (i.e., DS1 and above) in the Phoenix, Arizona, metropolitan area. QUALITY STRATEGIES was asked to: describe the Phoenix High Capacity Market; describe the market participants; estimate the market shares of U S WEST and the other market participants; and to estimate the capacity of competitive providers of high capacity services in Phoenix.

The Phoenix market for high capacity services can be best described as a three tier market, as illustrated below, with U S WEST and other CAP/CLEC providers selling services to end users, resellers, and other carriers for "transport" purposes. This market can be sub-divided based on who high capacity services are sold to - Retail and Wholesale Markets - versus who is actually providing the underlying facilities - the Provider and Transport Markets.



Prior to the mid-1990's U S WEST largely had the Phoenix High Capacity Market to itself. Since 1994, MCI, GST, TCG, ELI, and MFS WorldCom have all turned-up high capacity networks in Phoenix. All of these competitors are seasoned well-financed telecommunications companies. Collectively, these five competitors have installed over 800 route miles of optical fiber and have connected several hundred buildings in the Phoenix area to their networks.

The growth in alternative fiber networks is reflected in market share data. In all cases, U S WEST's market share appears to be declining at a relatively rapid rate. As of the end of 1997, only 30% of the retail customers purchased high capacity services directly from U S WEST. The other 70% purchased services from resellers and other CAPs/CLECs. The situation was reversed with respect to the actual provision of high capacity service - where U S WEST accounted for 72.1% of the Provider Market and 84.1% of the Transport Market with the other providers accounting for the remainder. Even these relatively high market shares represent a significant decrease from the end of 1994 when U S WEST serviced 94.1% of the Provider Market.

Recent data indicates that other CAPs/CLECs are capturing approximately half of the growth in high capacity services, in the rapidly growing Phoenix market. Between the second and the fourth quarters of 1997, providers other than U S WEST accounted for 54% of the growth in the Provider Market and 42% of the Transport Market. This trend is expected to continue due to the fact that U S WEST competitors in Phoenix have an enormous amount of unused capacity in their existing fiber networks. It is estimated that less than 8% of the capacity of these competitive networks would be needed to handle all of U S WEST's existing traffic.

Both U S WEST's relatively low Retail Market share and the large amount of unused capacity in competitive networks make it highly likely that U S WEST's share of the Provider and Transport Markets will continue to decline. This decline will be exacerbated, particularly in the Transport Market, by continued consolidation in the telecommunications industry (e.g., the merger of AT&T and TCG).

INTRODUCTION

BACKGROUND

Although the Telecommunications Act of 1996 formally opened the local exchange market to competition for the first time, U S WEST has been experiencing competition of another type for several years. In the early part of the 1990s, Competitive Access Providers (CAPs) began installing fiber facilities in the Phoenix Metropolitan Statistical Area (MSA) to compete directly with the incumbent local exchange carrier, U S WEST, for a portion of its market.

Primarily, the CAPs began offering high capacity (DS-1 and DS-3) circuits to end-users and carriers as a means of bypassing the local exchange carrier (U S WEST). High capacity circuits are used to transport traffic between end user premises, from end-user premises to carrier Points of Presence (POPs) or to transport traffic between POPs and Central Offices (COs) or tandems.

THE HIGH CAPACITY MARKET

The High Capacity Market can be segmented in several ways. First, because high capacity circuits are used for two distinct purposes, two separate sub markets emerged: 1.) the Provider Market and 2.) the Transport Market. For purposes of this study, we will refer to the combination of the two as the High Capacity Market. Please refer to the graphic on page 9 for a visual description of this concept.

- Provider Market: Provider circuits are DS-1 and DS-3 circuits provisioned by a facilities-based local telecommunications provider (either U S WEST or a CAP). These circuits are ultimately purchased by end-users to transmit voice and data traffic from the end user's premise to a POP or CAP switching center. The provider does not always sell the circuit directly to the end user.
- Transport Market: Transport circuits are high capacity lines purchased by carriers to transmit voice and data traffic from one POP to another or to transmit voice and data traffic from a POP to a Central Office or tandems (for distribution). Transport circuits are purchased by one communications company from another communications company.

The overall High Capacity Market can also be viewed as consisting of a Wholesale Market and a Retail Market. Often a Local Exchange Carrier or CAP provisions a circuit, it does not necessarily maintain the account or bill for it - because it is often resold by another carrier. Because of this situation, QUALITY STRATEGIES is also providing Retail and Wholesale views of the High Capacity Market.

- Retail Market: the retail view is another method of distributing provider share. Instead of crediting the company that provisions the circuit, it credits the company that sells and bills for the circuit and maintains the relationship with the end user.
- Wholesale Market: the wholesale view consists of circuits provisioned by a local telecommunications provider (either U S WEST or a CAP) and sold to another telecommunications provider - either for resale to end users or for transport. Please refer to the graphic on page 9 for a visual description of this concept.

These distinct views became necessary as the High Capacity Market began to mature and purchasing patterns began to deviate from the typical provider - purchaser standard. From the outset, CAPs attempted to form alliances with long distance carriers to provide the private lines linking their customers to their POPs, as well as providing their transport facilities. It is from these beginnings that the concept of High Capacity resale was formed necessitating the Retail and Wholesale views to supplement Provider and Transport views. At present, many CAPs operating in the Phoenix market sell more circuits to long distance carriers than to end users. Because of this, Provider and Retail market share figures illustrate very distinct distributions, although both measure the same market.

COMPETITORS

Currently, the following five CAPs operate networks in the Phoenix MSA (Maricopa and Pinal Counties) and compete with U S WEST for Provider and Transport market share:

- MFS WorldCom
- Teleport Communications Group (TCG)
- MCI
- GST
- Electric Lightwave, Inc. (ELI)

Each of the five aforementioned competitors has invested resources to build optical fiber networks in the Phoenix area that compete directly with U S WEST. Collectively, the five competitors have installed over 800 route miles of optical fiber and connected several hundred buildings to their networks. Equipped as they are today, the CAPs could assume all of U S WEST's Provider and Transport traffic with their networks at less than 8% capacity. This would leave the other 92% to capture future growth of bandwidth demand.

Because the High Capacity (Transport and Provider) Market is very specialized, the CAPs have become niche communications providers catering to interexchange carriers and business customers in particular vertical segments (particularly financial services, health care, and information transfer). This has allowed CAPs to focus on small geographic areas when constructing fiber networks (particularly central business districts and business-intensive suburbs).

MARKET SHARE

To formulate market share estimates, QUALITY STRATEGIES considered several inputs. Results are primarily based on primary, survey market research that elicits share figures based on end user data. Additionally, QUALITY STRATEGIES analysts conducted an exhaustive competitive research analysis to gather additional information about each market examined.

As of the fourth quarter of 1997, U S WEST's share of the High Capacity Market was 77%. During this time, U S WEST share of the Provider Market was 72%. In other words, U S WEST facilities constituted 72% of circuits being used by end users for DS-1 and DS-3 high capacity services. U S WEST retained less than 30% of the Retail Market - meaning U S WEST maintained a relationship with fewer than one third of all end users in the fourth quarter of 1997. The disparity is largely the result of carrier purchases of U S WEST/CAP circuits for resale to end-users.

In the fourth quarter, U S WEST circuits constituted approximately 84% of the Phoenix Transport Market (down from 94% in the second quarter of 1997). CAPs generally install extraordinary amounts of excess capacity around long distance POPs and local COs and are capable of absorbing traffic from U S WEST facilities immediately. This is the primary reason for the significant drop in market share between the second and fourth quarters of 1997; by installing excess capacity, CAPs have facilitated a situation where traffic can be easily migrated from one carrier's facilities (U S WEST) to another's (Phoenix CAPs). U S WEST's Transport share is particularly vulnerable to competitors as long distance carriers and CAPs begin to consolidate.

In addition to the Transport Market, recent telecom mergers and consolidations are likely to impact the Wholesale Market. In the fourth quarter of 1997, U S WEST accounted for approximately 79% of the Wholesale Market, which includes circuits sold to carriers for purposes of resale or for transport. As CAPs' and carriers' relationships grow, carriers are less likely to purchase wholesale circuits from U S WEST and become more reliant on acquired subsidiaries.

The continuing trend toward a declining market share for U S WEST becomes evident through an examination of its share of market growth over the last several quarters. Between the second and fourth quarters of 1997, U S WEST accounted for 58% of Transport Market growth and 46% of Provider Market growth. Losses in market growth may not become evident in installed-base share results for several quarters as the market grows and U S WEST accounts for a smaller percentage of the total. Share of growth is the primary indicator of how a competitor's installed-base market share will look in the future - and CAP competitors in the Phoenix area have captured a majority share of market growth over the past several years.

OBJECTIVES

The primary objective of this report is to provide U S WEST with a high-level overview of the Phoenix MSA (Maricopa and Pinal Counties) High Capacity Market. The report is structured to meet this objective by providing:

- A description of the High Capacity Market and sub-markets
- A description of the High Capacity competitive landscape in the Phoenix MSA
- An estimate of the potential competitive capacity of existing fiber networks
- Market share estimates for U S WEST and its competitors

This report describes and defines the Phoenix MSA High Capacity Market, identifies the types of circuits included in the share estimates, briefly describes common high capacity applications, and identifies and describes the strengths and weaknesses of facilities based competitors in the Phoenix MSA. The competitive analysis identifies market trends, carrier consolidation, and purchaser capacity requirements.

CAPABILITIES AND EXPERIENCE

QUALITY STRATEGIES is a research and consulting firm working exclusively in the telecom industry. QUALITY STRATEGIES has provided competitive market information, including market share results and competitive market data to every RBOC and large LEC for the last decade.

QUALITY STRATEGIES maintains its own professional team of analysts, methodologists, client service personnel and calling centers focused exclusively on the telecommunications market.

QUALITY STRATEGIES believes that quantitative market share data can be coupled with qualitative competitive data to accurately describe and assess the market for high capacity circuits. The information provided in each section is designed to supplement that from the other. This analysis is based on primary and secondary market research conducted for U S WEST. Market Share estimates reflect fourth quarter, 1997 analyses. Overall Provider and Retail estimates are based on a 95% confidence interval with a ±5% margin of error. Wholesale and Transport market share estimates are primarily the result of extensive competitive research. (see appendix for additional information on methodology).

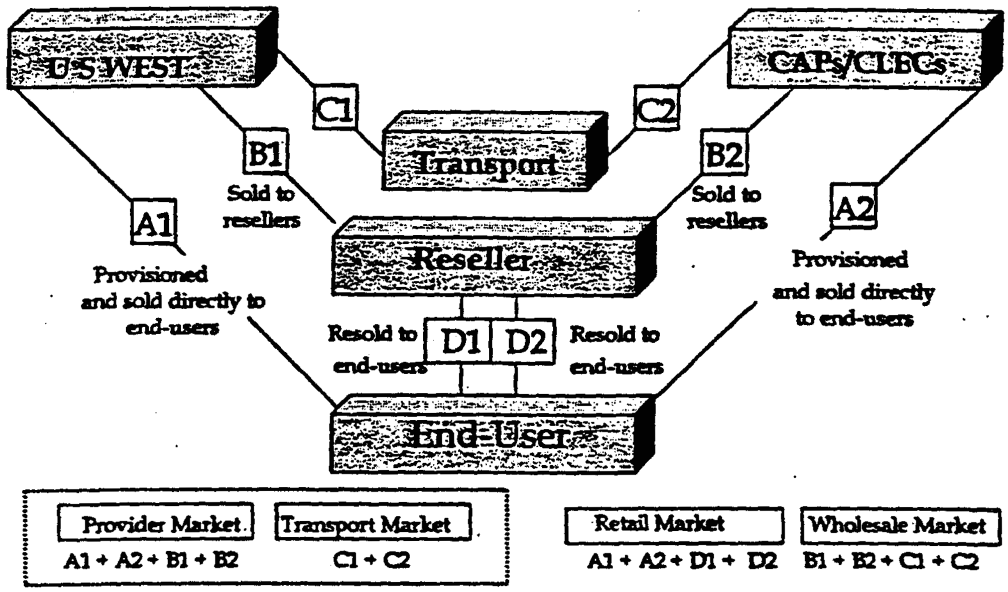
MARKET DESCRIPTION

HIGH CAPACITY MARKET

QUALITY STRATEGIES defines the High Capacity Market as the universe of DS-1 (1.544 mbps) and DS-3 (45 mbps) circuits used either for end user customer's traffic (Provider) or for carrier transport (Transport).

- End users utilize high capacity circuits to connect two business locations in the same LATA (point-to-point) or to connect to a carrier's point-of-presence (POP) (special access).
- Carriers utilize high capacity transport circuits to provide links between POPs, central offices, and tandems.

The following diagram depicts the various components of the High Capacity Market, which is represented by the sum of A1, A2, B1, B2, C1 and C2.



PROVIDER MARKET

Provider circuits are DS-1 and DS-3 circuits provisioned by a facilities-based local telecommunications provider (either U S WEST or a CAP). These circuits are ultimately purchased by end users to transmit voice and data traffic from the end user's premise to a POP or CAP switching center. The provider does not always sell the circuit directly to the end user. Referring to the visual, the Provider Market is defined as A1+A2+B1+B2.

TRANSPORT MARKET

Transport circuits are high capacity lines purchased by carriers to transmit voice and data traffic from one POP to another or to transmit voice and data traffic from a POP to a central office or tandems (for distribution). Transport circuits are purchased by one communications company from another communications company. Referring to the graphic, the Transport Market is comprised of C1+C2.

THE RETAIL MARKET

The retail view is another method of distributing Provider share. Instead of crediting the company that provisions the circuit, the Retail Market credits the company that sells and bills for the circuit and maintains the relationship with the end user. The Retail Market is defined as A1+A2+D1+D2 (see diagram page 9).

THE WHOLESALE MARKET

The wholesale view consists of circuits provisioned by a local telecommunications provider (either U S WEST or a CAP) and sold to another telecommunications provider - either for resale to end users or for transport. The Wholesale Market is comprised of B1+B2+C1+C2 (see diagram page 9).

MARKET SHARE

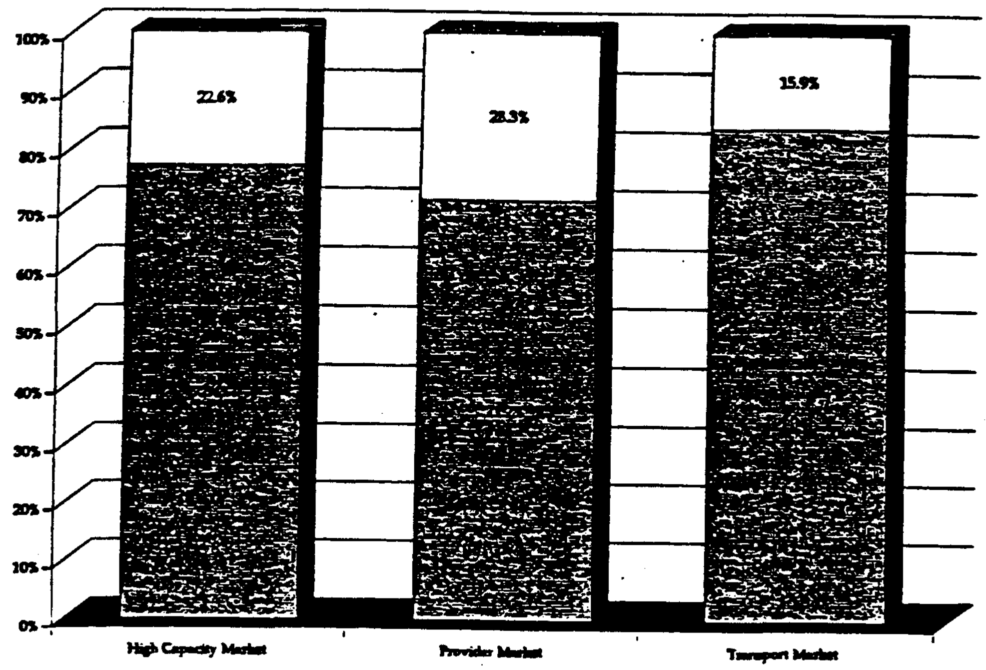
Because the Phoenix market has become increasingly competitive over the last two years, U S WEST has experienced rapid, consistent erosion of its High Capacity Market share. QUALITY STRATEGIES has been tracking U S WEST's Provider Market share since 1994 and its Transport Market share since 1997. As could be expected, U S WEST's share of each market has decreased substantially as CAPs have entered the market and expanded existing facilities.

Following are several views of the High Capacity Market. All of the charts include DS-1 and DS-3 circuit information. On some of the charts DS-0 circuit information is also included. The charts which include DS-0 circuits are clearly labeled. DS-0 circuits are included because in some views of the market the survey results included DS-0 circuits and this information cannot be extracted. Overall the DS-0 circuits when converted to DS-1 equivalents do not appreciably affect the results, accounting for approximately 3% of the market.

HIGH CAPACITY MARKET

U S WEST's market share for the fourth quarter of 1997 accounts for approximately 77% of the High Capacity Market in the greater Phoenix area. The market is comprised of the Provider Market (in which U S WEST accounts for approximately 72% of the total) and the Transport Market (in which U S WEST accounts for 84%).

PHOENIX MSA
U S WEST HIGH CAPACITY MARKET SHARE
4Q97



	U S WEST	Competitors
High Capacity	77.4%	22.6%
Provider	71.7%	28.3%
Transport	84.1%	15.9%

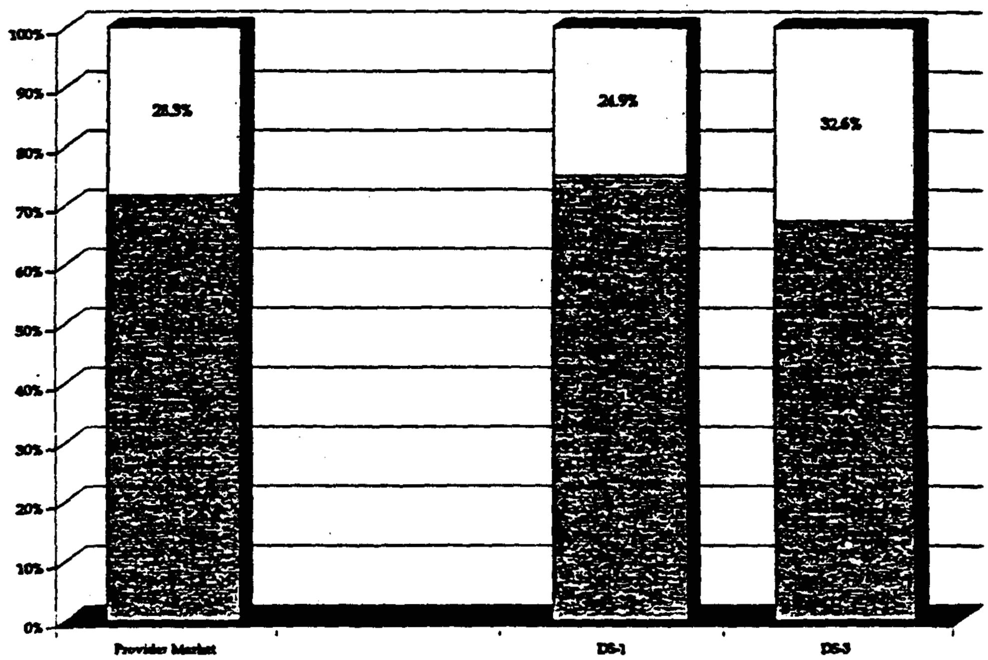
Results for Provider Market are presented at a 95% Confidence Level with a ±5% Margin of Error.

PROVIDER MARKET

To date, facilities-based competitors have captured over 28% of the Provider High Capacity Market in the Phoenix MSA. This can be attributed to recent marketing campaigns geared toward the end user and a proliferation of competitive alliances between CAPs and long distance carriers.

The High Capacity study was designed to measure U S WEST's and its competitors' share of DS-1 and DS-3 circuits. As a provider, U S WEST's share of the DS-3 market has declined more rapidly than its share of the DS-1 market. This is largely attributable to competitor's marketing strategies that attempt to secure accounts from large, bandwidth-intensive businesses. Because many of the larger businesses end users are located in Phoenix's central business district, competitors have been able to reach them on a facilities basis without investing a substantial amount of resources in infrastructure.

PHOENIX MSA
U S WEST PROVIDER MARKET RESULTS (BY CIRCUIT SPEED)
4Q97



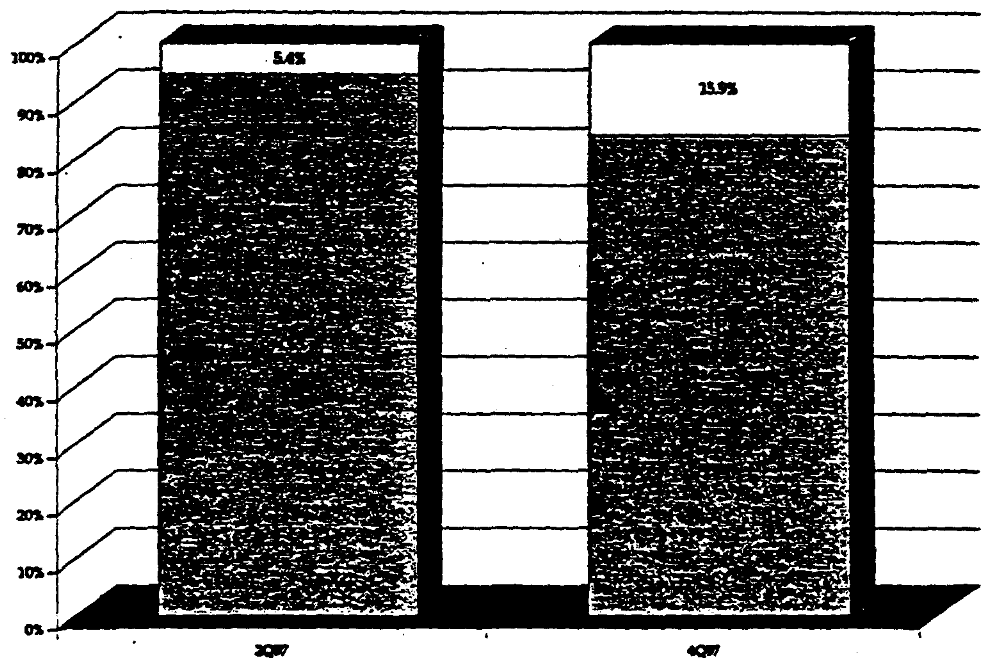
	U S WEST	Competitors
Provider Market	71.7%	28.3%
DS-1	75.1%	24.9%
DS-3	67.4%	32.6%

Results for Provider Market are presented at a 95% Confidence Level with a ±5% Margin of Error. Disaggregated Share results have higher margins of error to account for smaller sample sizes

TRANSPORT MARKET

As has been the case in the Provider Market, CAPs are beginning to capture a large percentage of the Transport Market. As of fourth quarter, 1997, competitors comprise roughly 16% of the Transport Market, up from 5% in the second quarter of 1997. This is largely the result of a desire on the part of carriers to minimize dependence on U S WEST. Additionally, CAP share of the Transport Market is likely to increase substantially as they are absorbed by interexchange carriers and other, large telecommunications companies. Although U S WEST's share of the Transport Market is higher than its share of the Provider Market, Transport Market incremental losses have been far greater recently (over 10% since second quarter 1997) as CAPs and carriers have merged and formed competitive alliances. While U S WEST's market position is vulnerable in each market, many analysts foresee the rapid erosion of RBOC Transport Market share in the near future

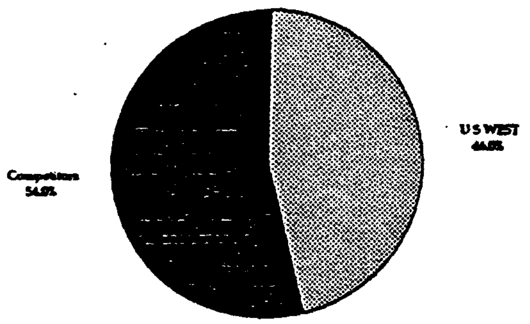
PHOENIX MSA
TRANSPORT MARKET SHARE
2Q97-4Q97



	2Q97	4Q97
U S WEST	94.6%	84.1%
Competitors	5.4%	15.9%
	100.0%	100.0%

PROVIDER MARKET GROWTH

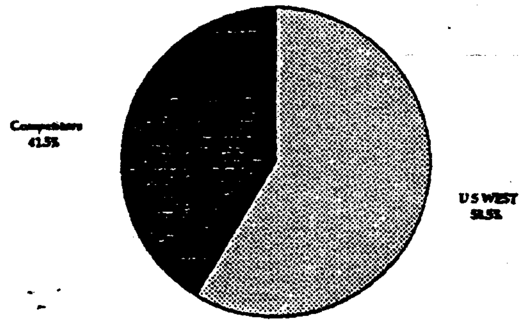
One of the key indicators of future market share in the telecommunications market is share of market growth in the present. Market growth is defined as new market growth (new subscriptions), the conversion of switched lines to high capacity facilities and competitive conversions. From the second quarter of 1997 to the fourth quarters of 1997, QUALITY STRATEGIES estimates the Provider Market grew 6.5%. Although U S WEST accounts for over 72% of Provider high capacity circuits, U S WEST accounted for roughly only 46% of the market growth. Facilities based competitors were responsible for over one half of new high capacity circuits added between June and September. At this rate, U S WEST can expect its share of the installed base to diminish to its share of market growth.



	2Q97 - 4Q97
U S WEST	46.0%
Competitors	54.0%
	100%

TRANSPORT MARKET GROWTH

Although U S WEST's share of the Transport Market growth is higher than its share of Provider Market growth, the facilities-based competitors account for a substantial percentage. Between the second and fourth quarters of 1997, U S WEST was responsible for less than 59% of new transport circuits. At this pace, U S WEST can expect its share of the installed base to continue to decline.



	2Q97 - 4Q97
U S WEST	58.5%
Competitors	41.5%
	100.0%

TREND

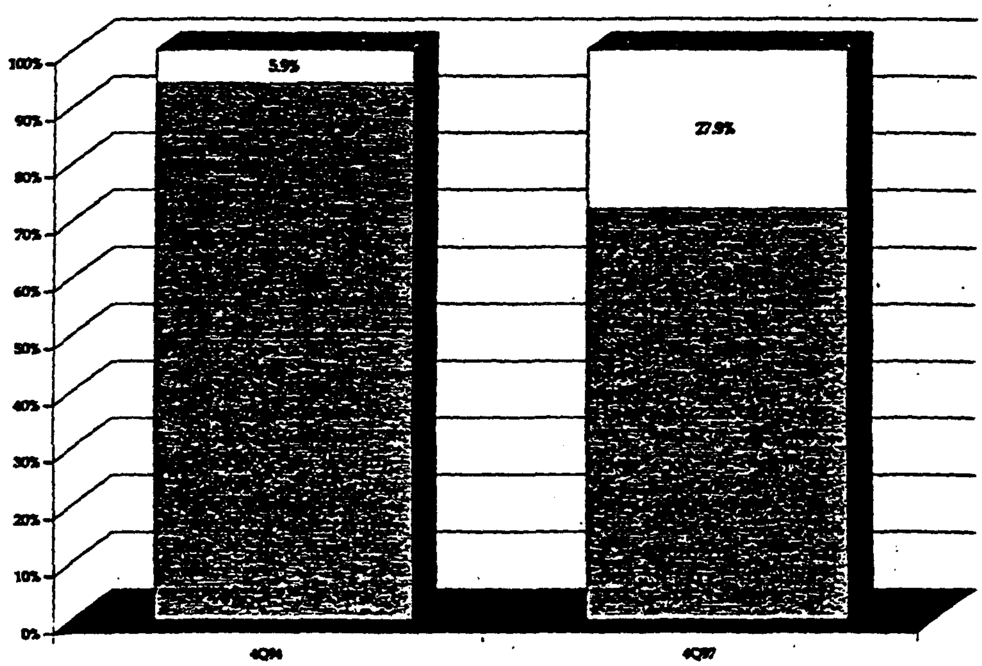
The most effective means of demonstrating U S WEST Provider Market share loss is to view its share over time. QUALITY STRATEGIES has been tracking high capacity data for U S WEST since the fourth quarter of 1994. Since that time, U S WEST has relinquished a considerable portion of the Provider Market. In 1994, TCG was the only CAP operating in the city - and its network was limited at that time. Over the next three years, the CAP presence in the Phoenix MSA grew rapidly and conversely, U S WEST's market share fell rapidly.

The following chart provides market share trend data. Trend includes DS-1, DS-3, and DS-0 circuits.

PHOENIX MSA

PROVIDER MARKET SHARE TREND*

4Q94-4Q97



	4Q94	4Q97	Δ 4Q94–4Q97
U S WEST	94.1%	72.1%	-22.0%
Competitors	5.9%	27.9%	22.0%
	100.0%	100.0%	

*Trend data for the Provider Market includes DS-0, DS-1, and DS-3 circuits.
Results for the Provider Market are presented at a 95% Confidence Level with a ±5% Margin of Error.

RETAIL MARKET

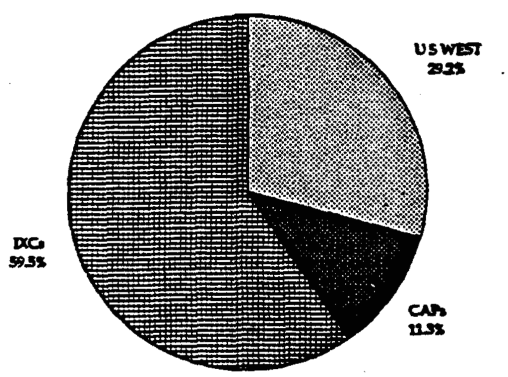
As indicated previously, the High Capacity Market can also be viewed as Retail and Wholesale Markets. In the Retail Market, competitors account for approximately 70% of end user relationships. U S WEST's largest competitors are currently AT&T, MCI, and Sprint. However, the vast majority of IXC-billed high capacity circuits are resold by the carrier rather than provisioned directly. As of fourth quarter 1997, AT&T's and TCG's combined retail share accounts for a greater percentage of the total market than U S WEST. Following completion of the AT&T/TCG and WorldCom/MCI mergers, the two aforementioned providers will comprise over 50% of the Retail Market.

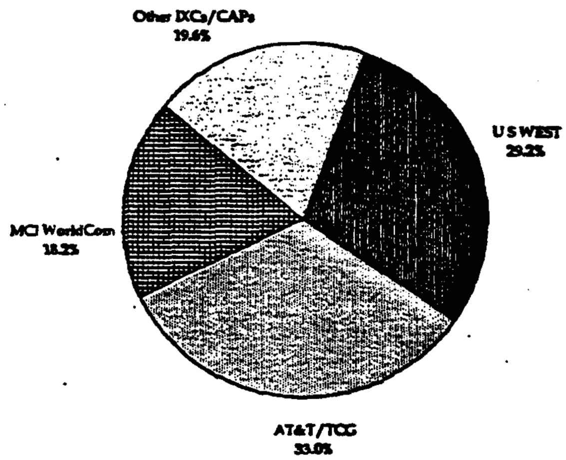
This Retail data includes DS-1, DS-3, and DS-0 circuits.

PHOENIX MSA

U S WEST MARKET SHARE OF THE RETAIL MARKET*

4Q97





RETAIL SHARE (U S WEST AND COMPETITORS)	Retail Share (IXCs and Acquired CAPs shown together)

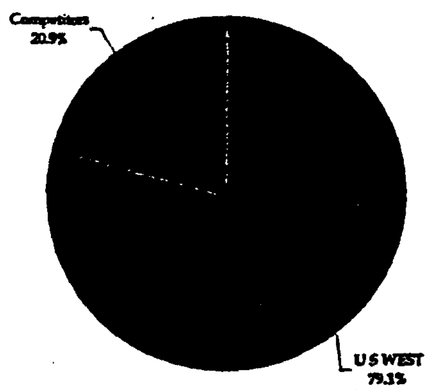
*Retail Market includes DS-0, DS-1, and DS-3 circuits.
Results for the Retail Market are presented at a 95% Confidence Level with a ±5% Margin of Error. Disaggregated Share results have higher margins of error to account for smaller sample sizes.

WHOLESALE MARKET

Currently, U S WEST accounts for less than 80% of the Wholesale Market (defined as the universe of circuits sold to resellers and circuits used for transport). However, U S WEST's share is likely to decrease substantially over the next several quarters following the completion of recent mergers in the telecom industry. AT&T and MCI will begin to take advantage of having local facilities at their disposal and attempt to decrease the amount of business it conducts with the RBOCs.

Wholesale data includes DS-1, DS-3, and DS-0 circuits.

PHOENIX MSA
U S WEST MARKET SHARE OF THE WHOLESALE MARKET*
4Q97



	4Q97
U S WEST	79.1%
Competitors	20.9%
	100.0%

*Wholesale Market includes DS-0, DS-1, and DS-3 circuits.

COMPETITIVE LANDSCAPE

OVERVIEW

As one of the largest MSAs in the nation, Phoenix has become home to numerous communications-intensive businesses that require high capacity DS-1 and DS-3 services. Phoenix is one of the most rapidly growing areas in the United States, with demand for these high capacity services expected to escalate. Analysts project that the Phoenix area will sustain an annual immigration rate of over 50,000 people for the next 15 years. This figure does not even take into account the area's birth rate, which is also likely to be higher than the national average due to Phoenix/Maricopa County's low median age. This growth in population will demand expansion of the telecommunications infrastructure to provision these high capacity services. U S WEST and its competitors will focus on meeting this demand.

Phoenix is currently host to one of the most competitive telecommunications markets in U S WEST's territory. While competitors' facilities once focused on the central business district exclusively, investments in network build-out over the last 24 months have resulted in fiber facilities that reach the furthest-lying suburbs. Today's competitive fiber networks connect several hundred buildings in Phoenix and transmit voice and data traffic for a variety of services including local exchange, high capacity, long distance and data.

U S WEST's competitors in the greater Phoenix area include facilities based CAPs such as TCG, WorldCom, ELI, GST and MCI. These companies offer a wide array of telecommunications products and services. A brief overview of these companies and their competitive presence in the Phoenix area follows.

COMPETITORS

MFS WORLDCOM

MFS WorldCom (formerly Metropolitan Fiber Systems) was established in the mid 1980s and partially financed by the Peter Keiwet construction company of Omaha, NE. In 1996, the assets of MFS were purchased by Jackson, MS-based LDDS WorldCom in an exchange of debt. MFS WorldCom operates metropolitan fiber networks in over 50 of the largest markets in the United States and is generally regarded as one of the leaders in competitive local telecommunications. In 1997, it purchased Brooks Fiber Properties and assumed its fiber networks in several tier II and tier III markets throughout the United States.

In Phoenix, MFS WorldCom's network has been operational since 1995 when it initiated service to several large end users and every major carrier in the central business district. Since then, the network has expanded to encompass a much broader geographic area.

MFS WorldCom's Phoenix network consists of four overlapping SONET rings featuring backbone speeds of OC-48. It is equipped with backup power sources and route diversity. In 1997, MFS WorldCom installed a central office switch in Phoenix that will allow it to diversify its product offering with the rollout of local exchange services. It currently operates two equipment sites in the area, one downtown and one on 44th Street. Currently, there are over 50 single and multi-tenant buildings connected to WorldCom's network in the Phoenix MSA.

Traditionally, MFS WorldCom has targeted the middle market for telecommunications services. Although many of its high capacity customers represent the large business segment, a large percentage of its local exchange customers are smaller organizations. In several markets, MFS WorldCom has purchased telecommunications providers to establish a customer base - including several Centrex resellers in California. Although MFS has worked with every major IXC over the last several years, it prefers to sell directly to the end user and maintain the account itself. This is particularly true following the LDDS/WorldCom merger.

TELEPORT COMMUNICATIONS GROUP (TCG)

Along with MFS WorldCom, TCG is a national CAP/CLEC operating fiber networks in 60 of the United States' largest markets. It has been in existence since the late 1980s when it was founded by Robert Annunziata, a former AT&T employee who was then working for Merrill Lynch in New York. Mr. Annunziata is often credited for starting the CAP movement when he installed a fiber link connecting Merrill Lynch's Manhattan headquarters to the company's teleport on Staten Island. Initially, TCG was financed by Merrill Lynch but was later spun off and financed by several leading cable companies, Sprint, and public debt offerings.

TCG was among the first entrants to the Phoenix communications market when it initiated service along its fiber network in 1994. Presently, TCG operates the largest fiber network in the greater Phoenix area; spanning over 300 route miles and connecting between 120 and 150 single and multi-tenant buildings. TCG's network is composed of 11 self-healing SONET rings and is capable of providing facilities-based service to the majority of the MSA's business-intensive localities, including: downtown Phoenix, Scottsdale, Tempe, Mesa, and Chandler. Currently, TCG operates three equipment sites in the greater Phoenix area, two within the city of Phoenix as well as one in Tempe.

In 1996, TCG was authorized by the Arizona Public Utilities Commission to offer local switched services in the Phoenix area via its Lucent 5ESS central office switch. Traditionally, TCG has marketed integrated packages of telecommunications services to the largest business end users. However, TCG has recently modified that strategy and attempted to move "down-market." This is largely the result of its local exchange product rollout and the proliferation of high capacity use among smaller and medium-sized businesses.

Since 1994, TCG has adhered to a very aggressive expansion schedule, having completed a 30 route mile, OC-48 fiber ring in the Southeastern suburb of Chandler in 1997. Before beginning the extension, however, TCG secured a high capacity contract with Motorola - which operates a large office in Chandler.

GST

GST became a player in the Phoenix high capacity market in 1997 when it purchased the rights to the Phoenix Fiber Access network (which had previously been a 50/50 joint venture between GST and the IntelCom Group). The majority of the network was installed in 1996 and is largely limited to Phoenix's central business district.

Although GST's footprint in the Phoenix market may be smaller than several of its competitors, it plans to become a force in the Arizona communications market on a statewide level. In addition to its Phoenix network, GST operates facilities in the greater Tucson area (located approximately 120 miles South of Phoenix). Its Tucson network currently consists of over 70 route miles and connects several of the area's larger buildings. In 1997, GST completed construction of long-haul facilities connecting the Phoenix and Tucson markets; allowing it to target businesses operating in both locations. It will also allow GST to accumulate wholesale revenue by leasing capacity to other telecommunications companies.

GST is headquartered in Vancouver, WA and run by industry veteran John Warta (GST's chairman and CEO). GST operates networks throughout the western United States; focusing primarily on tier II and III markets. In the Southwest, GST runs metropolitan area networks in Phoenix, Tucson, Albuquerque, and Los Angeles. To route local traffic, GST has installed a Nortel DMS 500 central office switch at its equipment site on Lincoln Street at 18th Avenue.

MCI

In its attempt to become a full-service, facilities-based telecommunications provider in the greater Phoenix area, MCI has built a small fiber network in the city's central business district to transmit voice and data traffic. In contrast with several other CAPs/CLECs in Phoenix, MCI has not invested heavily in fiber facilities to serve end users on the city's periphery or in the suburbs. Instead, it has limited the scope of its network to the city's downtown area and connected the buildings that house its largest long distance accounts (to provide facilities-based high capacity service). MCI also provides services through resale.

Traditionally, MCI has targeted the large business segment for voice and data services (long distance, high capacity, data, and local exchange). Therefore, it finds itself competing primarily with U S WEST and TCG rather than MFS WorldCom and ELI. In Phoenix, MCI is the primary long distance carrier for several Fortune 500 companies - a sales channel that it frequently leverages to win high capacity and local exchange accounts. Today's MCI offers a variety of multi-service packages that include long distance, local exchange, high capacity and internet access.

In each of its local markets, MCI builds its fiber networks according to SONET ring architecture. Its network backbones run at speeds up to OC-48 and feature route diversity and electronic redundancy. To route local exchange traffic in Phoenix, MCI installed a Nortel DMS 500 in 1996 (although it was not activated until 1997).

ELI

Having turned up its network in 1994, ELI was one of the first providers of competitive telecommunications services in the greater Phoenix area. Like MCI and MFS WorldCom, ELI originally limited the scope of its network to Phoenix's central business district. However, it decided to expand its network as the suburban demand for communications services increased. In 1997, ELI entered into a strategic alliance with the Salt River Project (SRP), an electric utility provider in the state of Arizona. Under the terms of the agreement, ELI leases substantial amounts of SRP dark fiber that traverses the entire area. The combined ELI-SRP network now encompasses over 400 route miles and is capable of delivering facilities-based service to Phoenix, Tempe, Scottsdale, Chandler, and Gilbert among others.

Historically, ELI has focused its marketing efforts on the middle market, although it has recently increased marketing campaigns directed toward Internet Service Providers (ISPs). One of its primary overall strategies is to establish several communications networks in the western United States and become a regional provider of communications services. At present, ELI operates competitive facilities in Phoenix, Salt Lake City, Las Vegas, Portland, and Seattle, enabling ELI to effectively market service to businesses operating in one or more of these markets. Additionally, ELI has established long-haul links between many of its markets and leases capacity to ISPs and other carriers.

ELI's network in Phoenix consists of multiple, overlapping SONET rings both in the city and in the suburbs. It employs a counter-rotating ring configuration in the construction of its backbone to add redundancy and protect against network failure. To ensure that fiber cuts do not result in lost traffic, ELI has built its network with route diversity and electronic redundancy to reroute traffic in milliseconds. In 1997, ELI installed a Nortel DMS 500 central office switch to route local exchange traffic.

CONSOLIDATION

Over the last two years, mergers and competitive alliances have transformed the competitive landscape of the telecommunications market. Several of these mergers involve CAPs and long distance carriers that compete directly with U S WEST and will dramatically affect its market position over the next several years.

MCI/MFS WORLDCOM

The first major merger announced in 1997 (involving U S WEST competitors) was a union of MCI Communications of Washington, D.C. and WorldCom of Jackson, MS. The merger follows WorldCom's 1996 acquisition of Metropolitan Fiber Systems (a facilities-based competitor of U S WEST in the Phoenix area) and its 1997 acquisition of Brooks Fiber Properties. Additionally, MFS has already acquired national ISP UUNET in 1996 before its acquisition by WorldCom. The combined entity will have enormous market power in Phoenix and the United States as a whole. It combines the nation's second and fourth largest long distance companies, a major provider of competitive local communications services, and the two largest internet backbone operators in the world.

When the merger is complete (projected to happen in the third quarter of 1998), MCI WorldCom's sphere of influence in the Phoenix MSA will increase dramatically. The combined facilities will result in:

- Over 100 route miles of local fiber (including WorldCom's 75 route mile backbone and MCI's 20-30 miles)
- Two central office switches
- 70-100 "lit" buildings
- Several long-distance POPs and switches

With this merger MCI WorldCom will be able to decrease its reliance on U S WEST's services and facilities. Currently, U S WEST provisions hundred of high capacity circuits linking MCI long distance customers to the MCI POP in Phoenix. However, it will have the option of moving a large percentage of this traffic over to WorldCom facilities - resulting in a substantial reduction in MCI's costs. Because WorldCom has connected numerous buildings to its Phoenix-area network, MCI will have the option of providing true facilities-based service on a large-scale basis through the utilization of WorldCom facilities. MCI may also further decrease its reliance on U S WEST's facilities which supply the infrastructure used for the origination and termination of long-distance calls by migrating transport traffic from U S WEST-provisioned circuits to WorldCom's facilities, resulting in a reduction in MCI's operating costs as well as a reduction in U S WEST's access revenues.

Additionally, the two companies have an apparent synergy that will strengthen the merged carrier and allow it to impact the market quickly. Because WorldCom's traditional market consists of smaller and medium-sized businesses while MCI tends to focus on the large business market, there will be minimal overlap in sales forces and a less complicated integration of operations.

AT&T/TCG

Also in 1997, AT&T and TCG announced a merger that analysts expect to be complete by the end of the third quarter of this year. The acquisition provides AT&T with an easy, rapid entrance to the facilities-based local exchange and High Capacity Markets. TCG becomes the recipient of a well-established sales channel to increase its switched services customer base.

In a manner similar to the MCI/WorldCom merger, there is an apparent synergy between AT&T and TCG. Traditionally, TCG has directed its marketing efforts toward the large business market, and rapidly accumulated a customer list laden with Fortune 500 companies. Conversely, AT&T's recent strengths have been the small business and consumer markets. With the merger, AT&T will be poised to reassert its influence among large business customers and TCG will expand its penetration to include the small business market. TCG will also acquire additional resources from the merger to allocate for network expansion in the Phoenix MSA.

Like MCI, AT&T stands to benefit significantly from the merger in that it will undoubtedly lead to a reduction in operating costs in its core business - long distance. AT&T will be able to reduce its reliance on U S WEST for high capacity circuits to AT&T's customers, transport, and switched access, further reducing U S WEST's infrastructure revenues.

COMPETITORS AT A GLANCE

The following matrices provide summary information for high capacity facilities-based competitors in the Phoenix MSA. For additional information please refer to the appendix attached.

	WorldCom	TCG	MCI
Overall Strategy	One-stop provider for communications services, including local exchange, HICAP, data, internet, long-distance.	Leading provider of communications solutions to businesses. Service packages include local, data, long-distance, HICAP.	One-stop, single billing for businesses. Services include local, long-distance, HICAP, data.
Approximate Route Miles	75	>300	20-40
On-net Buildings	>50	>150	25-35
Central Office Switching	Nortel DMS 500	Lucent 5ESS	Nortel DMS 500
Network Establishment	2Q95	2Q94	1996
Business Target Markets	Traditional focus on the middle market. Seeks national accounts, solicits to other tenants in on-net buildings. Focus on existing WorldCom, UUNET customers.	Traditional focus on high-end users, now moving "down-market." Most TCG customers have enormous communications needs.	Traditional focus on large businesses. Relies heavily on existing L.D. customer base. Reputation for outstanding customer service.
Residential Target Markets	Not actively targeting	Not actively targeting	Not actively targeting
Geographic Areas	Phoenix's central business district, Camelback/Lincoln areas, Tempe, Scottsdale, and the Sky Harbor Airport	Area wide. Central Phoenix, Camelback, Scottsdale, Tempe, Mesa, Chandler, Glendale, Paradise Valley, Phoenix Sky Harbor Intl. Airport, Tolleson	Fiber is located in Phoenix's central business district (although MCI provides services in Mesa, Scottsdale, and Tempe via resale and use of U S WEST facilities)
Competitive Alliances	Pending merger with MCI to form MCI WorldCom	Pending merger with AT&T	Pending merger with WorldCom to form MCI WorldCom

(Continued on next page)

COMPETITORS AT A GLANCE

	ELI	GST
Overall Strategy	Provider of diversified communications services, including local, L.D., HICAP, and data services	Provider of integrated communications services - DS-0 through OC-N, data services, local exchange, ISDN
Approximate Route Miles	400	11 miles in downtown Phoenix with an additional 18 miles of right-of-way and conduit available for expansion. 300 Route miles of fiber in the state of Arizona
On-net Buildings	30-45	15-25
Central Office Switching	Nortel DMS 500	Nortel DMS 500
Network Establishment	1995	1996
Business Target Markets	Middle market and high-end users, ISPs.	All business customers, large and small.
Residential Target Markets	Not currently targeting	Not currently targeting
Geographic Areas	Throughout the metropolitan area. Central Phoenix, Tempe, Mesa, Chandler, Glendale, Paradise Valley, Tolleson, Gilbert	Downtown Phoenix and Southern Arizona
Competitive Alliances	Partnership with Salt River Project (local utility provider) in Phoenix	Formed Phoenix Fiber Access with ICG in 1995. Purchased ICG half in 1997.

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COMPETITOR CAPACITY

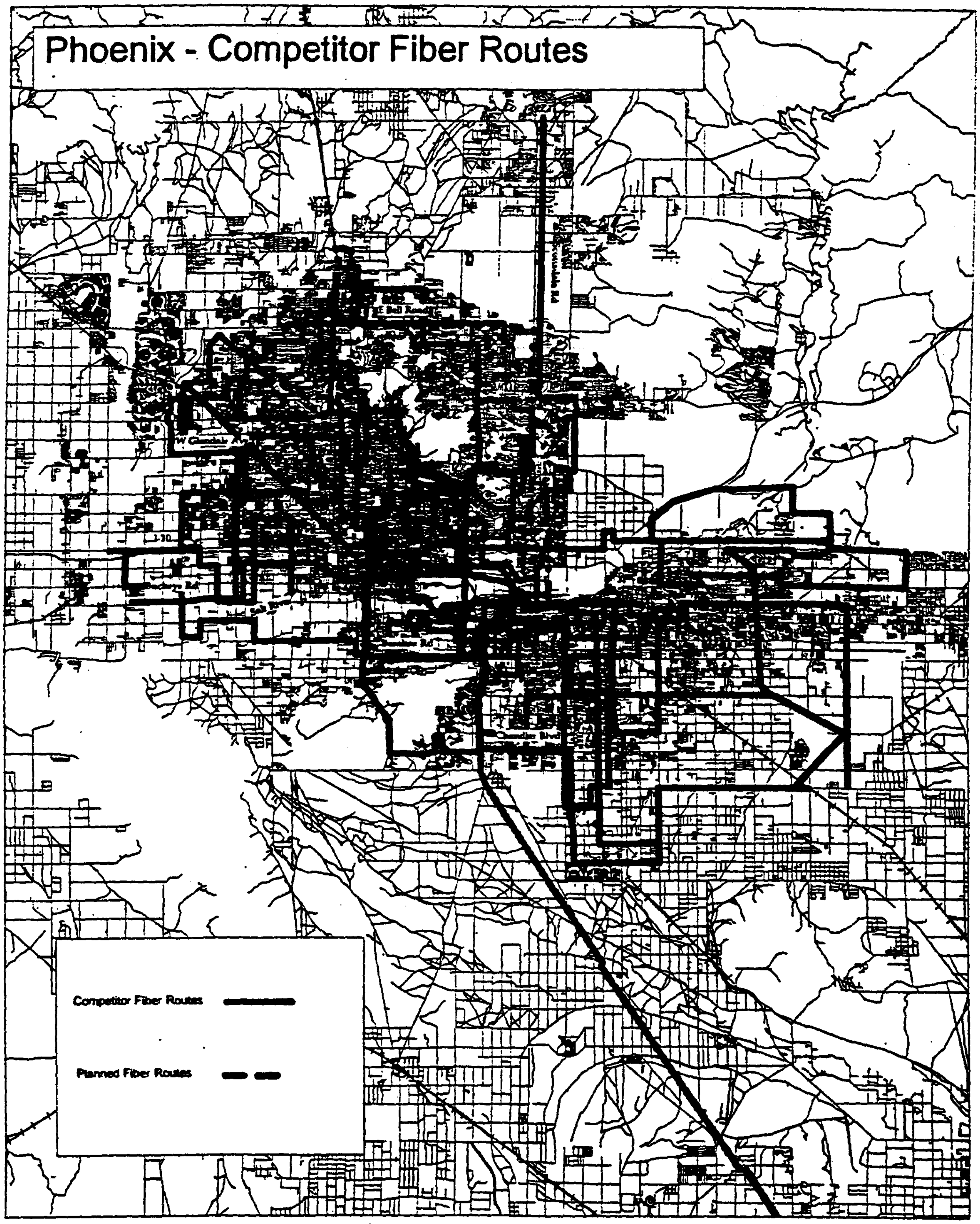
In recent years, U S WEST has become particularly vulnerable to losing additional Provider Market share due to the relative ease of switching providers (from both the wholesale and retail perspectives). During the initial infrastructure deployment, CAPs overbuilt their networks to meet the anticipated bandwidth demands of the future. Therefore, CAP networks are equipped with significantly more capacity than is currently being utilized. In fact, many industry analysts feel that several competitors are using only a small fraction of theoretical network capacity at the present time.

Two facets of CAP network construction generally contribute to their enormous capacity: 1.) the use of 144 strand optical fiber cable and 2.) adherence to SONET ring architecture. By using 144 strand cables, CAPs are capable of operating 36 "systems" across their networks (assuming a system is comprised of 4 individual fiber strands). The use of SONET ring network architecture allows CAPs to install self-healing rings that are connected, yet function independently – thereby increasing overall network capacity as rings are added to the network. Because CAPs have made several capacity allowances in the construction of their metropolitan area networks, they are able to grow and add circuits without necessitating frequent upgrades. In other words, there is a low marginal cost (from a capacity standpoint) associated with adding customers and circuits. To further facilitate the migration of traffic from RBOC facilities to competitive networks, CAPs frequently waive installation charges for new circuits.

As is the case with Provider high capacity circuits, CAPs will have little difficulty assuming Transport traffic from IXCs and other carriers. Generally, CAPs install extraordinary amounts of capacity around long distance POPs, U S WEST central offices, and competitive switching centers because of the enormous amount of traffic that originates and terminates at these facilities. In all likelihood, only a fraction of that capacity is currently being utilized and CAPs have the capability to assume Transport circuits without upgrading network capacity.

See the following page for a map of the competitor fiber routes.

Phoenix - Competitor Fiber Routes



Several factors contribute to network capacity, including the type of fiber used, transmission software, the number of SONET rings deployed, and the number of nodes in operation. The following table is designed to provide the basic competitor facilities that contribute to the overall capacity of a network. According to QUALITY STRATEGIES estimates based on U S WEST-supplied aggregate data (including DS-1, DS-3, and optical circuits used for end user traffic and transport), U S WEST currently operates approximately 85,700 DS-1 equivalents. The existing CAP networks could easily handle all U S WEST traffic (including optical circuits) by having only three systems activated in each CAP network (or less than 8% of total capacity).

In this case, we are defining a system as consisting of four individual fibers. Since CAPs generally install 144 strand fiber in their backbones, it is possible to have 36 systems under this arrangement. Assuming that each fiber ring runs at optical speeds (OC-3 through OC-48) and that all backbone rings are comprised of 144 strand fiber, the competitive networks in Phoenix (taken together) could handle all U S West traffic at less than 8% capacity. Please refer to the table below for a detailed description of CAP capacity in Phoenix.

Network capacity estimates are calculated based on the following inputs: Backbone speeds (which vary from ring to ring), and the number of SONET rings. The number of equipment sites was not taken into account for the calculation of network capacity. Please refer to the following page for a table illustrating competitive network capacity.

COMPETITOR CAPACITY

	TCG	WorldCom	MCI	ELI	GST	Total
Maximum Backbone Speed (in OC-n)	48	48	48	48	48	N/A
Approximate Percentage Operating at OC-48	75%	100%	100%	80%	75%	N/A
Other Backbone Speed (in OC-n)	12	0	0	12	12	N/A
Approximate Percentage Operating at that Speed	20%	0%	0%	20%	20%	N/A
Other Backbone Speed (in OC-n)	3	0	0	0	3	N/A
Approximate Percentage Operating at that Speed	5%	0%	0%	0%	5%	N/A
Average Backbone Speed (in OC-n)	38.55	48.00	48.00	40.80	38.55	N/A
SONET Rings operational in network	10	4	3	7	3	27
Approximate Capacity in OC-n	386	192	144	286	116	1,123
Approximate Capacity in DS-1 Equivalents*	10,794	5,376	4,032	7,997	3,238	31,437
Capacity Assuming 1 Systems	10,794	5,376	4,032	7,997	3,238	31,437
Capacity Assuming 3 Systems	32,382	16,128	12,096	23,990	9,715	94,311
Capacity Assuming 5 Systems	53,970	26,880	20,160	39,984	16,191	157,185

*Note: Approximate Capacity in DS-1 Equivalents is calculated by multiplying the above OC-n value by 28.

The average backbone speed of each competitor's network is derived by using the weighted averages of the various network speeds used in their network. The average backbone speed is then multiplied by the number of SONET rings operating in the network. The product is then multiplied by 28 to get the DS-1 equivalent. Examples of capacity are therefore provided based on the assumptions regarding the number of operational systems.

CONCLUSIONS

To date, U S WEST has lost approximately 23% of the High Capacity Market. This market includes both the Provider Market (consisting of special access and point to point circuits) and the Transport Market (consisting of circuits connecting POPs and local exchange COs).

Currently, U S WEST's share of the Provider Market is approximately 72%; down from 94% in the fourth quarter of 1994. Competitors have chipped away at U S WEST's market share through facilities buildout and alliances with interexchange carriers. Traditionally, U S WEST's facilities-based competitors have targeted its most valuable accounts - bandwidth-intensive large businesses. Because of this, CAP competitors have captured a greater percentage of the DS-3 (45 Mbps) market than the DS-1 (1.5 Mbps) market.

From a retail perspective, U S WEST maintains a billing relationship with fewer than 30% of all high capacity circuits. In other words, CAPs and IXCs maintain the end user relationship for 70% of special access high capacity circuits despite the fact that U S WEST currently provisions over 70% of these circuits.

While U S WEST's share of the Transport and Wholesale Markets are higher than its share of the Provider Market, recent incremental losses indicate that the figures may achieve parity in the near future. As of the fourth quarter of 1997, U S WEST accounts for 84% of the Transport market, down from 94% in the second quarter of the same year (six months earlier). Along the same lines, U S WEST's share of the Wholesale Market had dropped to 79% in fourth quarter 1997. Much of this share loss can be attributed to the realignment of carriers and an IXC desire to minimize the amount of business it conducts with U S WEST.

There is every indication that erosion of U S WEST's share of the Phoenix High Capacity Market will continue. Both U S WEST's relatively low Retail Market share and the enormous amount of unused capacity in competitive networks make it highly likely that U S WEST's share of the Provider and Transport Markets will continue to decline. This decline is expected to be exacerbated by continued consolidation in the telecommunications industry (e.g., the merger of AT&T and TCG).

APPENDIX

METHODOLOGY OVERVIEW

MARKET SHARE SUMMARY OVERVIEW

Market share results for Provider and Retail Market are based on actual usage obtained from surveys and invoice analyses. Market share results for this project are based on customer usage as of the fourth quarter of 1997. The following steps illustrate our process for delivering end user Provider and Retail market share results for U S WEST:

STEP 1: COMPETITOR AND INDUSTRY ANALYSES

Multiple inputs to sampling approach and sample plan, including competitor research, proprietary regional and national databases, and pre-survey screeners.

STEP 2: ESTABLISH SAMPLE PLAN AND QUOTAS

Develop preliminary market share estimates, establish quotas for appropriate strata, including high penetration and low penetration strata, and sub-strata (demographics, spending levels, etc.).

STEP 3: DEVELOP AND SELECT SAMPLE

Develop and select stratified random sample from sampling frame constructed from multiple sources, including third-party lists of businesses and proprietary databases.

STEP 4: CONDUCT FIELDWORK

Collect survey data and invoices. Based on the quotas established in the sampling plan, we conduct fieldwork to collect three inputs - short form surveys, long form surveys, and invoices - on which market share results ultimately are developed.

Achieve quotas for strata, and supplement with additional interviews for low incidence strata. Calibrate self-reported data with appropriate invoice bias factors.

STEP 5: ANALYSIS AND REPORTING

Analyze survey data and invoice data, and develop final results.

SAMPLING METHODOLOGIES

We develop our sampling plan using stratified random sampling techniques, which provide for efficient statistical estimates by designing the sampling plan based on particular strata (e.g., mix of utilization of competitors, demographic characteristics, geographic location, etc.) that we have developed and successfully applied over the past ten years. We utilize a mix of random and targeted surveys based on the stratified random sampling techniques. We use the random surveys to qualify respondents for different quotas established in our sampling plans. We also use the data obtained in the random surveys to establish weights for different strata when we reconstitute market share results.

SOURCES OF MARKET SHARE DATA

Market share results are based on data acquired from multiple sources, including surveys, customer invoices, and competitor research. We use our standard HICAP survey to collect data from business customers. QUALITY STRATEGIES surveyed business customers regarding their usage of high capacity DS-1 and DS-3 services. The survey includes questions on all competitive DS-1 and DS-3 services, including CAP fiber-based services, microwave services, satellite services, and customer-owned facilities. We also use surveys to collect demographic information, perception data, and other information not available on customer invoices.

We acquire customer invoices (RBOC, CLEC, CAP, IXC, and other competitive services) to provide market share results that are based on actual customer usage. We collect customer invoices to validate self-reported data and to calibrate reconstituted market share results based on actual customer expenditures and to correct for over- and under-reporting. On an aggregate basis, we analyze differences between survey and invoice data to develop and utilize bias estimates when calculating market share results.

STATISTICAL VALIDITY

This project is designed to provide estimates of high capacity (DS-1 and DS-3) share that are statistically valid for U S WEST'S overall high capacity services compared to competitive alternatives. Sample sizes are designed to achieve statistically valid market share results for the Phoenix MSA.

High capacity (Provider and Retail) market share results for the Phoenix MSA are based on a 95% confidence level with ±5% margins of error. Estimates for particular types of high capacity services (i.e., disaggregated results) are likely to have a higher margin of error. Trend results are based on a consistent methodology across time periods.

COMPETITOR RESEARCH OVERVIEW

The competitive analysis is comprised of information gathered by QUALITY STRATEGIES' analysts for two separate "CAP/CLEC Network Descriptions" projects commissioned by U S WEST in the third and fourth quarters, 1997. Competitive information is gathered from numerous sources (both primary and secondary) including the following:

- Interviews with CAP/CLEC and IXC professionals, including marketing, sales, administrative, executive, and technical personnel
- Interviews with large business end users
- Interviews with equipment vendors and equipment retailers
- Secondary market research including on-line sources and public information
- QUALITY STRATEGIES' extensive, national competitor database that has been maintained and updated continuously over the last ten years

HIGH CAPACITY MARKET SHARE

High Capacity Market share is based on all end-user DS-1 and DS-3 services, including Special Access and Point-to-Point (exchange) circuits as well as transport circuits (measured in DS-1 equivalents).

Prior to 2Q97, Quality Strategies had been providing U S WEST with HICAP Track results for providers offering facilities-based service. Thus, no resellers have been included in Provider Market results. Since 2Q97, Quality Strategies has been presenting Provider results in addition to Wholesale and Retail Market results. Each set of results is clearly documented to indicate whether it encompasses facilities-based provider results, retail results that include resellers, or wholesale results.

QUALITY STRATEGIES uses DS-1 equivalents as the basis for market share estimates. Market share is provided for each service provider in terms of the percentage of DS-1 equivalents provided. Specific steps used to determine DS-1 equivalent share for each competitive category are as follows:

A. **Determination of DS-1 Equivalents.** High Capacity market share is provided on a DS-1 equivalent basis. All circuits are expressed in terms of 1.544 Mbps. QUALITY STRATEGIES uses the following calculations to determine DS-1 equivalent share:

- One (T-1) DS-1 Circuit = One DS-1 Equivalent
- (T-3) DS-3 Circuits: Number of DS-3 Circuits x 28 = Number of DS-1 Equivalents

B. **Determination of DS-1 Equivalents Percentage Share.** DS-1 equivalents are totaled, and share is presented based on the percentage of the total each carrier provides.

Retail v. Wholesale. As stated previously, retail circuits are sold to end users. Wholesale circuits are provided to CAP/CLECs and IXCs for resale to end users. For example, a U S West circuit could be sold to AT&T (and paid for by AT&T), but resold to AT&T long-distance customers for special access to the AT&T POP. In this case, the end user is billed by AT&T although the circuit is provisioned and maintained by U S West. In this scenario, U S West receives Provider and Wholesale Market share for the circuit while AT&T receives Retail Market credit. Share of the Wholesale Market includes both end-user and transport circuits.

QUALITY STRATEGIES provides market share estimates based on DS-1 equivalents. Market share is provided for each service provider in terms of percentage of DS-1 equivalents provided.

POWER Engineers, Inc. Report

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PHOENIX FIBER STUDY
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I

EXECUTIVE SUMMARY

POWER Engineers, Inc. (PEI) has developed a cost model for the purpose of estimating the construction and equipment costs for Competitive Access Providers (CAPs) in the Phoenix, Arizona MSA, to displace existing U S WEST Communications (U S WEST) hi-cap services (DS1 and greater bandwidth). The model estimates the cost of extending fiber-optic cable links from existing CAP backbone fiber routes to current U S WEST hi-cap customer locations (locations), based upon the airline distance from the location to the nearest CAP route. The model also includes the equipment and labor costs to terminate circuits at the locations, duplicating the service level now provided by U S WEST.

Major cost elements in the model are:

> Structure costs - the aerial line or buried conduit path for the cable.
>
> Access costs - to access the CAP fiber cable and the customer building.
>
> Cable costs - including installation from the customer location to the CAP fiber route.
>
> Equipment costs – including installation at the customer location plus incremental items needed at the CAP hub.

The model provides "broad-gauge" costs, sufficiently accurate for capital budget planning for constructing connections to a large number of locations, but not suitable for site specific costs. To develop the cost model, costs were divided into distance sensitive elements, such as the length of the fiber cable for each location, and non-distance sensitive elements (at the distances assumed in this study), such as transmission equipment.

Distance sensitive cost factors were developed by grouping locations into distance bands by airline distance from the nearest CAP fiber route. Then a random, statistically valid sample of locations in each band was surveyed. Probable paths to the CAP routes were determined and distances were measured for each sample. Physical factors which contribute to costs were noted, such as type of structure (aerial or below ground), surface or aerial line conditions, etc. Detailed cost estimates were developed for each sample location. Average path costs per location by distance band for the locations in the sample were computed for application to the total population of U S WEST service locations. Path costs were calculated on the basis of a single entrance path to each customer location.

Non-distance sensitive cost algorithms, consisting of equipment costs including installation, were developed on the basis of the type and number of services provided. Automatic alternate route protection was assumed where service requirements exceeded three DS1's. This provides switching to an alternate path on the backbone fiber ring, should a failure occur on the primary backbone path.

Estimates of construction time per location were also developed. The average time per location is estimated to be two weeks. Considering probable actions by local governments to minimize traffic disruptions and other public inconveniences, it is estimated that a 100% buildout would require two-and-a-half to three years. A build, which took in the 49% of customer locations within 1,000 feet of an existing CAP fiber route, is estimated to require one-and-a-half to two years.

An assessment was also made of the wireless alternative for providing hi-cap services.

Cost Model results are summarized in the table below:

DISTANCE BAND (IN FEET) FROM NEAREST CAP FIBER ROUTE	NUMBER OF LOCATIONS WITHIN THE BAND	% OF TOTAL LOCATIONS WITHIN THIS BAND	AVERAGE COST PER LOCATION	TOTAL COST FOR ALL LOCATIONS IN THE BAND
0 TO 1,000	1,508	48.63%	$29,596	$44,631,239
1,001 TO 2,000	578	18.64%	$33,211	$19,195,750
2,001 TO 4,000	561	18.09%	$54,667	$30,668,367
4,001 TO 9,000	454	14.64%	$71,126	$32,291,231
ALL LOCATIONS	3,101	100%	$40,886	$126,786,587

II

STUDY OBJECTIVES

A. Fiber-Optic Cable Costs:

Develop a broad-gauge engineering assessment of the costs for Competitive Access Providers (CAPs) in the Phoenix, Arizona MSA, to displace existing U S WEST hi-cap services (DS1, DS3, OC-3, OC-12, OC-48) by extending fiber-optic cable links from existing CAP fiber routes to current U S WEST hi-cap customer locations (locations). This includes the provision of automatic, alternate routing where service requirements exceed three DS1's.

B. Wireless Transmission:

Review the potential for CAPS to utilize wireless transmission as an alternative means of providing hi-cap services.

ESTIMATING METHODS AND ASSUMPTIONS
FIBER-OPTIC PATH COSTS

TASK:

Develop a broad gauge engineering assessment of the costs for the path from a customer location to the nearest CAP fiber cable route.

DESCRIPTION:

These are the costs from each location to the nearest access point on the nearest CAP fiber route. This includes the cost of the structure, which carries the fiber-optic cable, the cost of the cable, and the cost of placing and splicing the cable.

The cost of the structure is the largest cost element. Many variables determine structure costs, the most significant being the distance and the type of structure. Structures assumed in this study were either aerial (typically joint use on an existing aerial line), or below ground in conduit.

Unit costs ($/ft) for aerial structure vary based upon whether there is an existing, adequate joint use line, or whether the line must be reinforced or extended, or be newly built. Variables which drive unit costs for below-ground conduit include the type of surface (e.g. asphalt, concrete, sod, etc.), the type of soil (e.g. sand, calciche, rock, dirt, etc.), the type of construction (e.g. trenching, boring, plowing, etc.), the depth at which the cable is to be placed, the location of existing buried utilities (sewer, water, gas, etc.), backfill requirements, restoration requirements, the need for additional utility holes to access backbone routes, and permitting costs. Other impacts, such as the need to perform work during non-peak traffic hours, may apply, depending on the jurisdiction and the season.

Fiber cable costs were based on length calculations; described below; multiplied by a cost per foot loaded to include estimated costs of installation.

ASSUMPTIONS:

Building entrances – it was assumed that each location will require a new building entrance, whether aerial or below ground.

Path types – it was assumed that the mix of aerial versus buried plant identified for locations sampled, could be applied to the entire population of customer locations, again, by distance band.

Depths for below ground paths – a depth of four feet from the surface was assumed.

Joint paths for adjacent locations – a portion of most paths from backbone routes to locations are shared between adjacent locations, or among multiple locations that lie near a common path. It was assumed, on the basis of the experience of a knowledgeable local contractor, that on average, path costs developed on a "stand-alone" basis for each location, should be reduced 40% to reflect this cost sharing effect, to reach a true average path cost per location.

Access to backbone routes - it was assumed that a utility hole would need to be added for splice access to the backbone fiber route, for buried paths, if there were no observable access points within 500' of the point on the backbone fiber nearest the probable path to the location.

Utility holes – for most locations, access to the existing CAP fiber route is readily available via existing utility holes or aerial splice enclosure. However, in many cases access would require placing a new utility hole. The proportion of sample locations, by band, for which additional utility holes would be needed, was calculated. This proportion was applied to the total population of locations within the band to the utility hole component of total path costs.

Utility hole sharing among multiple paths – every splice in a fiber-optic cable creates a loss of signal strength. To minimize these losses, the number of splice locations along backbone fiber routes must be minimized. This requires that the number of access points for paths to customer locations also be minimized. As a result, each access point along the route is typically used to connect multiple paths leading from the backbone route to customer locations. It was assumed, on the basis of PEI's experience and that of a local contractor, that on average, four paths to locations would be connected to the backbone route at each utility hole. To account for this sharing factor in the cost calculations, utility hole costs developed for "stand-alone" paths were multiplied by 25% to yield an average utility hole cost per location.

Utility hole summary – the observations outlined above led to a procedure in which average utility hole costs per location for all of locations, by airline distance band, were derived by multiplying the cost of a single hole by two factors. First, the cost of a hole was multiplied by the percentage of locations requiring a new hole, and then by a factor to account for sharing of holes by multiple paths (see Item 12, ESTIMATING PROCEDURE below for other utility hole cost calculations).

Fiber-optic cable - it was assumed that 24-fiber count, single mode fiber-optic cable would be used to connect the locations to the CAP fiber routes. This size provides adequate facilities for the four-fiber connections necessary for automatic alternate routing, plus growth. A local contractor advised that this is a typical size and type used for this purpose. Note that frequently, a larger size may be used for some distance from the backbone route, when several customers are located in adjacent quarters. Because the unit costs (cost per foot per fiber) drops as size increases, actual cable costs per customer are lower than those calculated for the study.

ESTIMATING PROCEEDURE:

Structure Costs:

It was noted that algorithms could readily be applied via computer, to the entire population of locations in U S West's data base, which would identify the airline distance from each location to the nearest CAP fiber cable route. PEI elected to develop a cost estimating model related to this airline distance, which could then be readily applied to the entire database via software. Even though actual path lengths vary significantly from the airline distance, by costing a statistically valid number of randomly selected sample locations in each band. an average path cost by band can be established with sufficient accuracy for overall budget planning.

Throughout the process, the experience of PEI and an experienced local contractor were used to develop estimates and assumptions.

The process used was as follows:

1. U S WEST's geographic databases of hi-cap service locations and CAP fiber-optic cable routes were provided to Power Engineers (PEI). Data included the address, and the number and type of hi-cap services by location, and the running lines of CAP "backbone" fiber routes.

2. PEI distributed the locations into one thousand foot distance bands from the nearest CAP fiber route, e.g. 0 to 1,000 ft; 1,001 to 2,000 ft, etc., using geographic information systems (GIS) software.

3. It was observed that more than half of the locations were within 1,000 ft of a CAP fiber route, and that the population fell rapidly with distance, fewer than 10% being beyond 4,000 ft. This led PEI to assume that CAPs would be unlikely to extend fiber beyond 9,000 feet, since costs increase with distance and there are few such locations.

4. A first approximation was made of path cost variation within each band for the purpose of setting initial sample size. This was based on estimated variations in distance within the band from the location to the nearest access point on the nearest CAP fiber route, and from the expected variation in unit costs for the different types of construction and terrain.

5. The rough estimate of potential cost variation by band was used to determine the number of sample locations to be studied within each band, to achieve a 95% confidence level for the average path cost within the band. The rough estimate was later validated and refined, based on cost variations observed among the sample locations.

6. The appropriate number of sample locations was chosen in each band using a random process.

7. Field visits were made to each location in the sample to obtain site specific data:

   Distance along a reasonable path from the property line of the location to the nearest access point on the nearest CAP fiber route (see assumptions, above).

   Type of access to backbone route - would a utility hole need to be added?

   Distance from the property line to the nearest building wall at the location.

   Distance from the building wall to the equipment room was estimated to be half the width of the building.

Type of structure

Type of surface conditions for cases involving conduit

Type of building entrance (aerial or conduit)

8. A site-specific cost estimate was obtained from a qualified local contractor for 50% of the sample locations.

9. The contractor and PEI personnel then reviewed the site specific estimates and related them to the type of structure (aerial or buried), permitting jurisdictions, and path length sections by surface condition (asphalt, concrete, sod, etc.). Unit cost factors were developed for the various jurisdictions and path conditions. Cost estimates for the remaining samples were then made by applying the unit cost factors to the path data acquired for the remaining locations.

10. Statistical indicators (average, standard deviation, median, and total variation) were determined for path costs within each band and the initial estimates of sample size by band were validated and revised, as indicated.

11. The average cost for each band, reduced 40% for common structure usage (a path segment used to connect more than one adjacent locations to the backbone route, see second paragraph under "Assumptions" above), was used as the path structure cost for all locations within the band which were not sampled.

12. Costs for utility holes which would need to be added to the backbone routes for access were calculated as follows:
    - Cost per hole was estimated at $8,000
    - Percent of locations by band needing a hole was determined from samples.
    - Utility hole costs per path were then multiplied by 25% to reflect that, on average, four paths share each hole (See ASSUMPTIONS, Utility hole costs, above).

    The resulting calculation of an average utility hole cost per location, by band, was:

    (Cost per hole) * (% of locations in band needing a hole) * (25% sharing factor)

    Example, for the 0 to 1,000 foot band:

    $8,000*33.9%*25% = $678, average utility hole costs per location in the band.

Cable Costs:

1. An Average cable length for each band was developed from the sample locations. The total distance from the access point on the nearest CAP route to the estimated location of the equipment room at the customer location was computed for each sample location within each band.

2. These average lengths for each band were then multiplied by the unit cost of fib loaded to account for placing, splicing and other costs.

3. This average cable cost by distance band is the estimating factor for cable costs for all customer locations within each particular band.

The sample locations, grouped by distance band, and the specific path cost estimates for each, are displayed in Chapter VIII, the Appendix, Section B. PATH COSTS. This Section also provides the average path cost for each band. These average path costs by band are applied to all locations, in the attached Cost Model, displayed in the Appendix, Section D., TOTAL COSTS.

IV

ESTIMATING METHODS AND ASSUMPTIONS
EQUIPMENT COSTS

TASK:

Develop an economical method of estimating costs for capital budgeting purposes, for the equipment required to provide the indicated service, using fiber-optic cable as the transmission medium.

DESCRIPTION:

This includes the equipment at the customer location required to provide the service, plus the incremental equipment at the CAP hub necessary to interface with the equipment at the customer location.

For each of the service types under consideration, equipment costs for the first circuit typically include "common equipment" which enable a number of similar circuits to be provided quickly, and at little additional cost. For DS-1 service, for example, the cost to provide 24 DS1 circuits over fiber cable is very little more than the cost to provide a single DS1 circuit, because the same amount of common equipment must be installed in either case.

Equations to describe these costs take the approximate form of the equation for a straight line, $y = mx + b$, for a range of circuit volume (groups of twenty-four in the case of DS1 circuits). In the DS1 example,

> y = the equipment costs at the location
> b = is the cost of the common equipment necessary to support a group of up to 24 DS1 circuits
> m = the incremental cost per DS1, and
> x = the number of DS1 circuits provided

The factors "m" and "b" change for various ranges of volume of DS1 circuits (similar for other bandwidths), requiring that different formulas be chosen based upon the circuit volume. This is because as circuit volume increases, it becomes economic to utilize higher capacity equipment, with different unit cost characteristics.

Although single DS1 circuits, for example, can be provided without placing the common equipment required to support twenty-four DS1's, this is rarely done because the "break even" point is very low. When growth occurs, per circuit costs on the "one-at-a-time" basis far exceed the costs of planning for groups of twenty-four.

Equipment is also required at the CAP hub to interface with each circuit installed at the customer premises.

PEI developed the formulas to fit each circuit type and volume by obtaining equipment costs from manufacturers and by estimating loadings for installation with the aid of a consultant with expertise in the field.

ASSUMPTIONS:

1. A Central Office or equivalent is in place and contains the higher order DS1 to OC-n equipment for distribution to a customer. The higher order transmission equipment is assumed to be in a "protected ring" configuration

2. The service is delivered to the customers premise via fiber cable. Four fibers will be assigned per system when service levels exceed three DS1's, two primary and two alternate route fibers. Automatic alternative route switching equipment is included, again, when service levels exceed 3 DS1's at a given location. All equipment will be protected against system card failure.

3. The loaded cost in the "hub" or C.O. is defined as the incremental equipment added to an existing system to facilitate the service. EG: Tx/Rx fiber cards, fiber jumpers, jack and frame interconnect, etc.

4. From one to twelve DS1 circuits are delivered via a fibered, Quad DS1 system, which delivers four circuits per Quad DS1 system.

5. When thirteen to 56 DS1's are required, a fibered DS3 multiplexer will be placed. The pricing shall include hub transceivers and customer premises common equipment plus incremental DS1 cards at the customer location up to a maximum of 28 DS1's per DS3 system.

6. When more than 56 DS1's are required, a fibered OC-3 system shall be placed. Pricing shall include hub transceivers and customer premises common equipment, plus incremental DS1 cards at the customer location up to a maximum of 84 DS1's per OC-3 system.

7. When a mix of DS1 and DS3 services are required, an OC3 or higher rate system will be placed. The pricing shall be incremental for each DS1 and DS3.

8. DS3 only: from one to three DS3's - an OC3 system will be placed. Pricing shall include hub transceiver plus customer premises common equipment, plus one DS3 card per circuit, to a maximum of three per system.

9. DS3 only: from four to twelve DS3's - an OC-12 system will be placed. Pricing shall include hub transceiver plus customer premises common equipment, plus one DS3 card per four DS3 circuits, up to a total of twelve DS3's per OC-12 system.

10. DS3 only: more than twelve DS3's - an OC-48 system will be placed. Pricing shall include hub transceiver plus customer premises common equipment, plus one DS3 card per four DS3 circuits, up to a total of 48 DS3's per OC-48 system.

11. When an OC3 or higher bandwidth service is required, a one-to-one configuration will be added. EG: an OC3 driver at the hub and an OC3 Tx/Rx at the customer premise.

12. When a higher order service is required (OC-3, OC-12, etc.), the hub location will always contain a system with enough bandwidth to accommodate the customer via

system cards. EG: an OC-3 requirement will be fed with an OC-12 system. requirement with an OC48 system.

13. The distance from hub to customer is short, less than 10,000 ft. All distribution cable is in place, terminated at distribution panels, and tested for performance at the hub and customer locations.

14. No Wave Division Multiplexer or any other "fiber bandwidth gaining" device shall be used to serve the customer. All fiber drivers shall be LED (Light Emitting Diode), low power, 1310 nm.

15. All pricing is loaded and consists of the following:

    a. Equipment - customer location - shelf, common cards with protection, cabling, customer electrical interface, fiber jumpers, power and LED drivers. If service requirements exceed three DS1's, high speed interface cards and high speed switching cards are included for automatic route protection switching.
    b. Equipment - hub location - system cards, fiber jumpers.
    c. Engineering - both locations. Includes drawings, site survey, records, and assignments.
    d. Installation - both locations. Includes unpacking, inventory, inspection, mounting, cabling (copper and fiber), cable continuity, system power up, updating records and cleanup of area.
    e. Test and turn-up - both locations. Includes all system operations, alarms, end to end performance and interconnect to demarcation.
    f. Maintenance - a factor is added to cover call outs and routine updates.
    g. Performance Monitoring - a factor is added to support the addition of the service to the Network Operations Center.
    h. Taxes and transportation are included in the loaded cost.

16. All customer premise equipment is AC powered. Uninterrupted Power Source (UPS) is not included.

17. No particular vendor is specified in this study. All pricing was derived from list prices with an average 15% (fifteen percent) discount, multiplied by a loading factor for installation. This method offers a median installed cost which may very by 5%, depending on local factors. To narrow the margin, several vendors have been researched.

18. All customer premise equipment will be placed in an environmentally controlled location.

19. All customer premise equipment will be slave timed by the hub, referenced to a stratum one timing source.

ESTIMATING PROCEEDURE - EQUIPMENT:

Methods for serving each type, volume and mix of services were examined.

1. Equipment prices, loaded for installation, etc., were developed, referencing a number of vendors.

2. Equipment configurations for each type, combination, and volume of service types were determined.

3. Pricing algorithms were developed for each type, combination and volume of service types.

4. Logic statements were written in a commercially available software, to allow the software to select the proper algorithm for the service required, at each customer location.

5. The algorithms were applied to the data for each location to determine the specific cost for each location.

6. These equipment costs were then added to path costs to estimate the total cost for each customer location.

The resulting equipment cost formulas were applied to all locations, along with logic functions to select the appropriate formula for each combination of service types and volumes. These formulas are described in detail in Chapter VIII, the Appendix, Section C. EQUIPMENT COSTS.

V

COST MODEL

The cost model is a programmed spreadsheet in a commercially available software (Microsoft Excel®). The procedure used is as follows:

1. All Phoenix Metro hi-cap customer locations in U S WEST's data base were distributed into distance bands from the nearest CAP fiber-optic cable route, as described in Section III above, and entered into the spreadsheet.

2. Path costs were estimated by applying the average path cost for each band, determined as described in Section III, to all locations in the band.

3. Equipment cost algorithms were entered for each type, mix, and volume of services.

4. Logic statements were programmed to drive the software to select the proper equipment cost algorithm to serve each customer location, based on the service requirements at the location. This yielded unique equipment costs by location.

5. Path and equipment costs were summed for each location and then by band.

The resulting costs are summarized in the Executive Summary above.

Costs for all locations are provided and summarized by band in the Appendix, Section D. TOTAL COSTS - FOR ALL LOCATIONS, BY BAND.

VI

BUILD TIME AND BUILD STRATEGIES

DEFINITION: The time required to build facilities and turn up service to a customer location is defined for this purpose as beginning at the time engineering is commenced, until service is turned up. This includes the time required to do the engineering, acquire digging permits and other rights-of-way, build the structure, install and terminate the cable, test the cable; and install, test and turn-up the equipment, and perform any hub or distant end functions which may be required. It is assumed that a suitable, environmentally controlled equipment space is available at the customer location.

The timetables outlined below are in the context of normal conditions. This means normal approval processes and time intervals for permits to use the public rights-of-way and other right-of-way acquisition, for traffic control measures, etc. It also contemplates normal concerns for the economics of construction - a balance between construction speed (the number of crews which can be efficiently managed simultaneously) and construction costs (use of only the best crews, at a rate that can be managed for maximum efficiency). If there were a crisis or emergency condition in which the continuity of data communications were in jeopardy, the time to build could be shortened considerably from the intervals outlined below.

TIME REQUIRED TO BUILD TO A SPECIFIC LOCATION - VARIATIONS:

The time required to build to different sites may vary significantly. Differences in build times are driven primarily by variations in the paths, such as length, digging conditions, etc. However, given a large number of sites to build to, an average time of two weeks per site can be managed economically in the Phoenix area. This is based on the experience of a qualified Phoenix contractor.

Applying more labor and equipment can shorten this time, but unit costs rise because of inefficiencies related to crowded work site conditions and the number of construction crews (simultaneous different construction locations) which can be effectively managed. Many factors that influence build time are beyond the control of the building party. These include governmental intervals for issuance of digging permits, Blue Stakes intervals (location of existing utilities), time required by owners of existing utilities to rearrange or safeguard them, limitations imposed by governments on construction activity in order to maintain public safety and convenience, etc.

The customer locations in the U S WEST database are widespread, but large concentrations of them are located along major business corridors. Given traffic flow and other public safety and convenience factors, it is estimated that a major construction effort could result in reaching those 1,508 locations within 1,000 feet of an existing CAP fiber route, in 18 to 24 months. It is estimated that a total of 24 to 36 months would be required to reach all 3,101 locations included in the study.

It is expected that the first six weeks to two months of a major building program would be absorbed in the initial acquisition of rights-of-way, digging permits, locating activity and traffic control planning. Beyond this period, these activities for the next sets of locations can be pursued in parallel, during the same time that physical construction to the initial sites is underway.

BUILD STRATEGIES:

Equipment costs are proportional to the volume of services at a location, and therefore are also proportional to revenue potential. Path costs, on the other hand, are a function of distance and surface conditions, almost independent of the volume of services (and thus potential revenue). Net operating income could therefore be optimized by focusing on the largest service volume customer locations with the lowest path costs, generally those nearest to the existing CAP fiber routes. In fact, it is reasonable to assume that the layout of the existing CAP routes was developed to minimize the total distance to the maximum number large service volume customer locations.

A likely CAP build strategy would appear to involve several elements, all aimed at maximizing the number of services provided (revenue) while minimizing the total path distance (cost). Such a strategy could be focused on the following locations:

Locations with high service volumes near the existing CAP routes. (Note that 50% of U S West customer locations are within 1,000 feet of these routes, and if the distance is extended to 2,000 feet, 69% of locations are covered.).

Extend further from existing routes, prioritizing targets based on service volumes, distances and adjacent addresses (opportunity to share path costs with more than one location).

Extend long distances only when service volumes are high and path costs are low (aerial paths for fiber cable, or DS1 service provided via wireless).

VII

ACCESS VIA WIRELESS FACILITIES

Several transmission facility options are open to a CAP seeking to provide service to a customer. These include leasing a circuit from U S West, connecting the customer to the CAP fiber-optic ring via a fiber-optic cable, and connecting the customer to the CAP network (either to a point on or near a fiber ring, or directly to a CAP hub) via microwave radio. The wireless alternative requires a clear line-of-sight between antennas and/or reflectors on the route.

One and two DS1 capacity radio systems are economical (roughly $20,000 per DS1 for spread-spectrum radio equipment, antennas and installation), and do not require the time-consuming licensing process. Transmission is relatively free from troubles induced by atmospheric disturbances at distances up to 6 miles, making them very attractive for rural and near-rural environments. However, obtaining zoning approval for the 2' to 3' dish antennas and the costs of antenna site leases can be a serious time and cost obstacle. These issues relegate the use of spread spectrum systems to locations at which circuits are not available for lease, or where new construction is required to furnish the service, and construction intervals are long and special charges apply.

Small numbers of DS1 circuits can also be provided by specialized common carriers, which lease 38gHz systems. Installation is typically prompt with a monthly lease cost near $300 per DS1. Antennas may be as small as an 18" dish mounted inoffensively behind a camouflage screen on the side or roof of a building. However, as in the case of spread spectrum systems, this alternative is usually employed only for locations for which existing circuits are not readily available. The cost of leasing a single DS1 circuit from U S West is about $350/month, and no zoning approvals, antenna site leases (sometimes required at both ends of the link), nor transmission power costs apply. Furthermore, the 38gHz systems are susceptible to rain fade during heavy thunderstorms. Route lengths are usually limited to about 3 miles (depending on terrain) to minimize atmospherically induced fade.

Digital radio systems are available for service at the OC-3 and greater levels, but their cost characteristics and large antennas (serious zoning issues) suit them more for long-haul transmission than for local use. These systems require FCC licensing on a per-link basis, which may involve significant lead-time.

The state-of-the-art in wireless systems is advancing rapidly. In addition to digital point-to-point radio, multipoint broadband radio systems now being developed (LMDS) promise economical alternative means of hi-cap transmission in the future.

To summarize, while leased circuits for small quantities of DS1's are often the economic choice in urban areas, and fiber cable is favored for its tremendous bandwidth capability; practical wireless alternatives are available, and are becoming increasingly competitive.

VIII

APPENDIX
DATA AND DATA SOURCES

I. Development of sampling process and sample sizes:
   STATISTICAL METHODS, Snedecor and Cochran, Sixth Edition, The Iowa State University Press, pp. 516-517.

II. Structure Costs, including Building Entry and extension to Equipment Room:
   Location Specific Cost Estimates by Frank Chilcoat of ECSI, Communicor, Inc., Phoenix, Arizona, Phoenix Area Construction Contractor

III. Cable Sizes and Types
   PEI Experience
   Frank Chilcoat of ECSI, Communicor, Inc., Inc., Phoenix, AZ

IV. Cable Costs
   PEI Experience
   Graybar Electric Co., Inc.
   Frank Chilcoat of ECSI, Communicor, Inc., Inc., Phoenix, AZ
   Lawrence Young, Former Design Engineer, GST Inc., Phoenix, AZ

V. Installation and Termination Loadings on Cable Costs
   PEI Experience
   Frank Chilcoat of ECSI, Communicor, Inc., Inc., Phoenix, AZ
   Lawrence Young, Former Design Engineer, GST Inc., Phoenix, AZ

VI. Equipment Configurations and Costs
   Donald M. Malagisi, R & L Electronics, Lakewood, CO., equipment broker and network design consultant.

VII. Build Time
   PEI Experience
   Frank Chilcoat, ECSI, Communicor, Inc.

VIII. Wireless Access Reference
   PEI Experience
   IEEE Proceedings, December, 1997, Volume 12, and pp. 1958-1972, M. Gagnaire: An Overview of Broad-Band Access Technology

VIII

APPENDIX
DATA AND DATA SOURCES

CONTENTS, DATA AND SOURCES

A. SOURCES OF DATA AND SAMPLINGS METHODS

B. PATH COSTS - LOCATION SPECIFIC ESTIMATES FOR SAMPLES IN EACH BAND
EXCEL ® SPREADSHEET "PATHCOST.XLS"

C. EQUIPMENT COSTS - FORMULAS FOR VARIOUS SERVICE SCENARIOS
EXCEL ® SPREADSHEET "EQPT COST.XLS"

D. TOTAL COSTS - FOR ALL LOCATIONS, BY BAND
EXCEL ® SPREADSHEET "TOTAL COST.XLS"

APPENDIX
DATA AND DATA SOURCES

B. PATH COSTS - LOCATION SPECIFIC ESTIMATES FOR SAMPLES IN EACH BAND EXCEL ® SPREADSHEET "PATHCOST.XLS"

Phoenix Fiber Study
Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communicatioı
Sample Locations

DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1	PHX	222	5	0	0	0	11,000	233,300	244,300
2	PHX	1	0	0	0	0	11,000	5,468	16,468
3	SCTSDL	2	0	0	0	0	11,000	5,468	16,468
4	TEMPE	1	0	0	0	0	11,000	5,468	16,468
5	PHX	1	0	0	0	0	11,000	5,468	16,468
6	PHX	2	0	0	0	0	11,000	5,468	16,468
7	PHX	1	0	0	0	0	11,000	5,468	16,468
8	PHX	4	0	0	0	0	11,000	8,068	19,068
9	PHX	2	0	0	0	0	11,000	5,468	16,468
10	PHX	1	0	0	0	0	11,000	5,468	16,468
11	PHX	1	0	0	0	0	11,000	5,468	16,468
12	PHX	1	0	0	0	0	11,000	5,468	16,468
13	PHX	4	0	0	0	0	11,000	8,068	19,068
14	CHNDLR	2	0	0	0	0	11,000	5,468	16,468
16	CHNDLR	3	0	0	0	0	11,000	5,468	16,468
17	TEMPE	1	0	0	0	0	11,000	5,468	16,468
18	PHX	14	0	0	0	0	11,000	23,192	34,192
19	PHX	10	0	0	0	0	11,000	24,204	35,204
20	MESA	33	0	0	0	0	11,000	47,089	58,089
21	PHX	1	0	0	0	0	11,000	5,468	16,468
22	TEMPE	1	0	0	0	0	11,000	5,468	16,468
24	TEMPE	1	0	0	0	0	11,000	5,468	16,468
25	PHX	290	8	0	0	0	11,000	287,666	298,666
26	PARA VLY	1	0	0	0	0	11,000	5,468	16,468
27	PHX	3	0	0	0	0	11,000	5,468	16,468
29	SCTSDL	1	0	0	0	0	11,000	5,468	16,468
30	PHX	3	0	0	0	0	11,000	5,468	16,468
31	TEMPE	2	0	0	0	0	11,000	5,468	16,468
33	PHX	3	0	0	0	0	11,000	5,468	16,468
35	PHX	2	0	0	0	0	11,000	5,468	16,468
37	PHX	1	0	0	0	0	11,000	5,468	16,468
39	TEMPE	11	0	0	0	0	11,000	24,204	35,204
40	PHX	3	0	0	0	0	11,000	5,468	16,468
41	PHX	1	0	0	0	0	11,000	5,468	16,468
42	CHNDLR	5	0	0	0	0	11,000	16,136	27,136
43	SCTSDL	1	0	0	0	0	11,000	5,468	16,468
46	PHX	1	0	0	0	0	11,000	5,468	16,468
48	PHX	7	0	0	0	0	11,000	16,136	27,136
49	PHX	11	0	0	0	0	11,000	24,204	35,204
50	PHX	28	1	0	0	0	11,000	49,686	60,686
51	PHX	3	0	0	0	0	11,000	5,468	16,468

Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communic
Sample Locations

DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
52	PHX	3	0	0	0	0	11,000	5,468	16,468
57	SCTSDL	2	0	0	0	0	11,000	5,468	16,468
60	MESA	1	0	0	0	0	11,000	5,468	16,468
63	MESA	1	0	0	0	0	11,000	5,468	16,468
65	TEMPE	2	0	0	0	0	11,000	5,468	16,468
66	PHX	1	0	0	0	0	11,000	5,468	16,468
68	MESA	1	0	0	0	0	11,000	5,468	16,468
70	PHX	1	0	0	0	0	11,000	5,468	16,468
71	SCTSDL	1	0	0	0	0	11,000	5,468	16,468
72	TEMPE	4	0	0	0	0	11,000	8,068	19,068
75	PHX	1	0	0	0	0	11,000	5,468	16,468
76	PHX	2	0	0	0	0	11,000	5,468	16,468
89	P	3	0	0	0	0	11,000	5,468	16,468
93	PHX	1	0	0	0	0	11,000	5,468	16,468
94	MESA	2	0	0	0	0	11,000	5,468	16,468
100	PHX	3	0	0	0	0	11,000	5,468	16,468
104	PHX	8	9	0	0	0	11,000	89,748	100,748
105	PHX	3	4	0	0	0	11,000	60,150	71,150
				Sub-Totals			$649,000	$1,160,511	
							Sum of Total Cost		$1,809,511
							Average of Total Cost		$30,670

ID	0 TO 1,000 FT FROM CLEC FIBER ROUTE, ID'S 1-52															
	CITY	DS-1	DS-3	DIST, FIBER TO PROP	DIST, PROP TO BLDG ENTR.	DIST, BLDG ENT TO EQP ROOM	PATH TYPE	STRUC. COST	STR $ PER FT	FEET, TDIST	ID	MH	PATH COST	CABLE COST	TOT OSP COST
1	PHX	222	5	200	200	150	ACB	8,000	14.55	550	1	0	8,000	880	8,880
2	PHX	1	0	50	500	150	C	19,000	27.14	700	2	0	19,000	1120	20,120
3	SCTSDL	2	0	300	800	100	BUR	31,000	25.66	1200	3	8,000	39,000	1920	40,920
4	TEMPE	1	0	700	60	90	BUR	22,000	25.66	850	4	8,000	30,000	1360	31,360
5	PHX	1	0	150	15	125	C/B	7,500	25.86	290	5	8,000	15,500	464	15,964
6	PHX	2	0	400	50	150	C	13,800	23.00	600	6	8,000	21,800	960	22,760
7	PHX	1	0	100	100	100	ACD	9,500	31.67	300	7		9,500	480	9,980
8	PHX	4	0	100	500	150	A/C	21,000	28.00	750	8		21,000	1200	22,200
9	PHX	2	0	300	150	80	A/C	12,000	22.64	530	9	8,000	20,000	848	20,848
10	PHX	1	0	500	200	150	C/B	19,500	22.94	850	10		19,500	1360	20,860
11	PHX	1	0	100	100	200	A/C	14,500	36.25	400	11		14,500	640	15,140
12	PHX	1	0	150	50	100	A/C	10,500	35.00	300	12		10,500	480	10,980
13	PHX	4	0	50	10	50	A	8,000	72.73	110	13		8,000	176	8,176
14	CHNDLR	2	0	100	50	150	BUR	10,000	34.11	300	14	8,000	18,000	480	18,480
16	CHNDLR	3	0	600	80	125	BUR	20,500	25.66	805	16	8,000	28,500	1288	29,788
17	TEMPE	1	0	320	0	75	AER	5,500	14.39	395	17		5,500	632	6,132
18	PHX	14	0	150	1350	175	A/C/B	34,500	20.60	1675	18		34,500	2680	37,180
19	PHX	10	0	200	200	200	ACB	25,000	41.67	600	19		25,000	960	25,960
20	MESA	33	0	200	0	150	AER	5,000	14.39	350	20		5,000	560	5,560
21	PHX	1	0	380	50	100	BUR	13,500	26.89	510	21		13,500	816	14,316
22	TEMPE	1	0	600	625	75	BUR	26,500	20.60	1300	22	8,000	34,500	2080	36,580
24	TEMPE	1	0	220	120	25	BUR	12,500	34.11	365	24	8,000	20,500	584	21,084
25	PHX	290	8	600	600	100	A/C/B	29,000	22.31	1300	25		29,000	2080	31,080
26	PARA VLY	1	0	400	600	150	C/G	24,000	20.87	1150	26		24,000	1840	25,840
27	PHX	3	0	200	125	85	A/C/B	8,500	20.73	410	27		8,500	656	9,156
29	SCTSDL	1	0	300	75	100	A/C/G	15,000	31.58	475	29		15,000	760	15,760
30	PHX	3	0	300	300	120	A/C/B	16,500	22.92	720	30		16,500	1152	17,652
31	TEMPE	2	0	350	20	70	BUR	12,000	26.89	440	31	8,000	20,000	704	20,704

ID	CITY	DS-1	DS-3	DIST, FIBER TO PROP	DIST, PROP TO BLDG ENTR.	DIST, BLDG ENT TO EQP ROOM	PATH TYPE	STRUC. COST	STR $ PER FT	FEET, TDIST	ID	MH	PATH COST	CABLE COST	TOT OSP COST
33	PHX	3	0	75	50	125	AC	8,000		250	33		8,000	400	8,400
35	PHX	2	0	125	50	100	ACB	9,500	34.55	275	35		9,500	440	9,940
	0 TO 1,000 FT FROM CLEC FIBER ROUTE, ID'S 1-52														
37	PHX	1	0	800	300	100	ACB	28,500	23.75	1200	37	8,000	36,500	1920	38,420
39	TEMPE	11	0	40	40	80	BUR	11,500	72.00	160	39		11,500	256	11,756
40	PHX	3	0	350	225	125	A	16,000	22.86	700	40		16,000	1120	17,120
41	PHX	1	0	400	0	200	BUR	16,000	26.89	600	41	8,000	24,000	960	24,960
42	CHNDLR	5	0	800	250	100	AER	16,500	14.39	1150	42	8,000	24,500	1840	26,340
43	SCTSDL	1	0	200	130	70	AER	6,000	14.39	400	43		6,000	640	6,640
46	PHX	1	0	300	300	20	C	14,500	23.39	620	46		14,500	992	15,492
48	PHX	7	0	150	50	125	ACB	9,500	29.23	325	48		9,500	520	10,020
49	PHX	11	0	75	150	75	D	8,000	26.67	300	49		8,000	480	8,480
50	PHX	28	1	700	200	190	A/C	17,500	16.06	1090	50	8,000	25,500	1744	27,244
51	PHX	3	0	300	75	125	AER	5,500	11.00	500	51		5,500	800	6,300
52	PHX	3	0	50	250	200	A/C	23,000	46.00	500	52		23,000	800	23,800
57	SCTSDL	2	0	700	0	100	AER	11,500	14.39	800	57		11,500	1280	12,780
60	MESA	1	0	5	60	150	AER	3,000	14.39	215	60		3,000	344	3,344
63	MESA	1	0	200	0	200	AER	6,000	14.39	400	63		6,000	640	6,640
65	TEMPE	2	0	200	70	200	AER	7,000	14.39	470	65	8,000	15,000	752	15,752
66	PHX	1	0	900	300	200	A/G	32,000	22.86	1400	66	8,000	40,000	2240	42,240
68	MESA	1	0	125	45	85	A/C	7,500	29.41	255	68	8,000	15,500	408	15,908
70	PHX	1	0	900	400	75	A/C	32,000	23.27	1375	70		32,000	2200	34,200
71	SCTSDL	1	0	350	500	350	AC	31,000	25.86	1200	71	8,000	39,000	1920	40,920
72	TEMPE	4	0	100	700	200	AER	14,500	14.39	1000	72		14,500	1600	16,100
75	PHX	1	0	300	150	50	A/B	7,500	15.00	500	75	8,000	15,500	800	16,300
76	PHX	2	0	400	200	80	A/C/G	11,000	16.18	680	76	8,000	19,000	1088	20,088
89	P	3	0	350	125	50	AER	8,500	16.19	525	89		8,500	840	9,340
93	PHX	1	0	1000	120	40	AER	16,500	14.39	1160	93		16,500	1856	18,356

94	MESA	2	0	30	240	250	AER	7,500	14.39	520	94		7,500	832	8,332
100	PHX	3	0	500	129	250	AER	18,000	20.48	879	100		18,000	1406	19,406
104	PHX	8	9	250	150	200	BORE	35,000	58.33	600	104		35,000	960	35,960
105	PHX	3	4	800	500	200	A/C/G	33,000	58.33	600	105		33,000	0	33,000
	# SAMPLES =	59				STRUCT TOT =		925,800		MH TOT =		160,000	1,085,800	61,238	1,147,038
						STRUCT AVG=		15,692		AVG-=		2,712	18,403	1,038	19,441
	ADJUST FOR COMMON					STRUCTURE COST=				MH COST=				MEDIAN	17,652
	STRUCTURE AND				=	AVG * 60%		$9,415		AVG * 25%		$678		STD DEV	10,307
	COMMON MANHOLE USE													AVG	19,441
						TOTAL PATH COST AVG =				$11,131			SD % OF MEAN		53%

ID	CITY	DS-1	DS-3	DIST, FIBER TO PROP	DIST, PROP TO BLDG ENTR.	DIST, BLDG ENT TO EQP ROOM	PATH TYPE	STRUC. COST	STR $ PER FT	FEET, TDIST	ID	MH	PATH COST	CABLE COST	TOT OSP COST
	1,000 TO 2,000 FT FROM CLEC FIBER ROUTE														
23	PHX	1	0	1200	700	250	AC	35,000	16.28	2150	23		35,000	3440	38,440
28	PHX	6	0	1850	250	150	A/C/B	31,000	13.78	2250	28	8,000	39,000	3600	42,600
32	PHX	5	0	1600	120	180	BUR	33,500	17.68	1900	32	8,000	41,500	3040	44,540
34	PHX	1	0	1800	150	75	AERIAL	23,000	11.36	2025	34		23,000	3240	26,240
36	PHX	2	0	1900	250	80	AERIAL	39,000	17.49	2230	36		39,000	3568	42,568
38	TEMPE	3	0	1500	100	65	BUR	29,500	17.68	1665	38	8,000	37,500	2664	40,164
45	PHX	2	0	1800	200	75	AC	42,000	20.24	2075	45		42,000	3320	45,320
47	PHX	1	0	1400	50	50	AER	19,500	13.00	1500	47	8,000	27,500	2400	29,900
53	SCTSDL	32	1	1800	150	100	BUR	36,000	17.68	2050	53	8,000	44,000	3280	47,280
54	TEMPE	1	0	1600	240	80	BUR	34,000	17.68	1920	54		34,000	3072	37,072
56	PHX	1	0	1200	0	125	AER	19,000	14.49	1325	56		19,000	2120	21,120
59	PHX	1	0	1900	100	150	AER	31,000	14.49	2150	59		31,000	3440	34,440
64	TEMPE	1	0	1900	300	200	BUR	42,500	17.68	2400	64	8,000	50,500	3840	54,340
77	CHNDLR	11	0	2100	500	200	AER	40,500	14.49	2800	77		40,500	4480	44,980
84	TEMPE	17	0	1100	300	100	BUR	26,500	17.68	1500	84	8,000	34,500	2400	36,900
90	PHX	1	0	1100	50	75	A	25,000	20.41	1225	90		25,000	1960	26,960
93	PHX	1	0	1000	120	40	AER	17,000	14.49	1160	93		17,000	1856	18,856
102	PHX	4	6	2000	900	500	A/C/B	49,000	14.41	3400	102		49,000	5440	54,440
103	SUN CITY	4	5	1800	1100	500	BUR	56,000	16.47	3400	103	8,000	64,000	5440	69,440
	# SAMPLES =	19				STRUCT TOT =		629,000		MH TOT =		64,000	693,000	62,600	755,600
						STRUCT AVG=		33,105		AVG-=		3,368	36,474	3,295	39,768
	ADJUST FOR COMMON					STRUCTURE COST=				MH COST=				MEDIAN	40,164
	STRUCTURE AND				=	AVG * 60%		$19,863		AVG * 25%		$842		STD DEV	12,001
	COMMON MANHOLE USE													AVG	39,768
						TOTAL PATH COST AVG =				$24,000			SD % OF MEAN		30%

ID	CITY	DS-1	DS-3	DIST, FIBER TO PROP	DIST, PROP TO BLDG ENTR.	DIST, BLDG ENT TO EQP ROOM	PATH TYPE	STRUC. COST	STR $ PER FT	FEET, TDIST	ID	MH	PATH COST	CABLE COST	TOT OSP COST
	2,000 TO 4,000 FT FROM CLEC FIBER ROUTE														
61	MESA	1	0	2600	150	30	A/BU	51,000	18.28	2780	61	8,000	59,000	4448	63,448
62	PHX	13	0	3500	800	300	A/C/D	99,000	21.50	4600	62		99,000	7360	106,360
67	PHX	1	0	3000	100	80	AER	10,500	3.30	3180	67		10,500	5088	15,588
58	PHX	2	0	3200	50	75		89,600	26.95	3325	58		89,600	5320	94,920
69	MESA	1	0	2600	25	60	AER	47,000	18.28	2685	69		47,000	4136	51,136
73	PHX	4	0	2500	50	150	A/C	34,000	12.59	2700	73		34,000	4320	38,320
77	CHNDLR	11	0	2100	500	200	AER	51,000	18.28	2800	77		51,000	4480	55,480
78	PHX	1	0	3200	300	150	C	88,000	24.11	3650	78		88,000	5840	93,840
79	SCTSDL	1	0	2500	280	50	BUR	67,000	23.66	2830	79	8,000	75,000	4528	79,528
80	PHX	1	0	2900	500	250	A/C	73,000	20.00	3650	80		73,000	5840	78,840
97	PHX	1	0	3500	200	75	AER	42,500	11.26	3775	97		42,500	6040	48,540
16	TEMPE	2	0	3500	120	150	BUR	81,000	21.60	3770	16	8,000	89,000	6032	95,032
81	CHNDLR	1	0	3600	150	125	BUR	71,000	18.28	3875	81		71,000	6200	77,200
86	SCTSDL	2	0	3650	40	25	BUR	88,000	23.65	3715	86	8,000	96,000	5944	101,944
92	CHNDLR	1	0	4000	70	30	AER	75,000	18.28	4100	92		75,000	6560	81,560
	15					STRUCT TOT =		967,600		MH TOT =		32,000	999,600	82,136	1,081,736
						STRUCT AVG=		64,507		AVG-=		2,133	66,640	5,476	72,116
	ADJUST FOR COMMON					STRUCTURE COST=				MH COST=				MEDIAN	78,84
	STRUCTURE AND				=	AVG * 60%		$38,704		AVG * 25%		$533		STD DEV	25,14
	COMMON MANHOLE USE													AVG	72,11
						TOTAL PATH COST AVG =				$44,713			SD % OF MEAN		35

4,000 FT TO 9,000 FT FROM CLEC FIBER ROUTE

ID	CITY	DS-1	DS-3	DIST, FIBER TO PROP	DIST, PROP TO BLDG ENTR.	DIST, BLDG ENT TO EQP ROOM	PATH TYPE	STRUC. COST	STR $ PER FT	FEET, TDIST	ID	MH	PATH COST	CABLE COST	TOT OSP COST
82	PHX	2	0	4500	300	200	A	36,000	7.20	5000	82		36,000	8000	44,000
83	PHX	56	2	4800	900	200	AER	85,500	14.49	5900	83		85,500	9440	94,940
85	PEORIA	1	0	4800	350	150	AER	51,000	9.62	5300	85		51,000	8460	59,460
88	SCTSDL	0	0	5300	100	280	BUR	112,500	20	5680	88	8,000	120,500	9088	129,588
95	SCTSDL	2	0	5300	240	200	BUR	113,500	20	5740	95	8,000	121,500	9184	130,684
96	PHX	1	0	8000	700	200	A	85,000	10	8900	96		85,000	14240	99,240
98	PHX	1	0	7500	200	50	A	30,000	3.87	7750	98		30,000	12400	42,400
99	PHX	1	0	7500	30	250	AEU	175,000	22.49	7780	99		175,000	12448	187,448
101	PHX	4	6	4800	200	150	A/C	95,000	18.45	5150	101		95,000	8240	103,240
	# SAMPLES =	9				STRUCT TOT =		783,500		MH TOT =		16,000	799,500	91,520	891,020
						STRUCT AVG=		87,056		AVG-=		1,778	88,833	10,169	99,002
	ADJUST FOR COMMON					STRUCTURE COST=				MH COST=				MEDIAN	99,240
	STRUCTURE AND				=	AVG * 60%		$52,233		AVG * 25%		$444		STD DEV	44,206
	COMMON MANHOLE USE													AVG	99,002
						TOTAL PATH COST AVG =				$52,847			SD % OF MEAN		45%

PATH COSTS SUMMARY BY BAND, PER CUSTOMER LOCATION

BAND, DISTANCE FROM CAP FIBER ROUTE	COST FOR PATH (STRUCTURE, ACESS TO CAP FIBER, ACCESS TO BUILDING TO EQUIPMENT ROOM, AND CABLE)
0 TO 1,000 FT	$11,000
1,001 TO 2,000 FT	$24,000
2,001 TO 4,000 FT	$44,500
4,000 TO 9,000 FT	$63,000

APPENDIX
DATA AND DATA SOURCES

C. EQUIPMENT COSTS - FORMULAS FOR VARIOUS SERVICE SCENARIOS
EXCEL ® SPREADSHEET "EQPT COST.XLS"

HI-CAP SERVICE EQUIPMENT COSTS
INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

DS1 SERVICE
FOR 1 TO 3 DS1'S, USE

QUAD SYSTEM WITHOUT AUTOMATIC ROUTE PROTECTION $5,468
CAPACITY: 4 DS1'S PER SYSTEM
2 FIBERS PER QUAD SYSTEM

EXAMPLE, FOR N DS1'S	N=	1
QUADS	1	$5,468
EQPT COST PER DS1		$5,468
FIBERS USED	2	

EXAMPLE, FOR N DS1'S	N=	3
QUADS	1	$5,468
EQPT COST PER DS1		$1,823
FIBERS USED	2	

DS1 SERVICE
FOR 4 TO 12 DS1'S, USE

QUAD SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY: 4 DS1'S PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

QUAD SYSTEM	$5,468
HIGH SPEED INTERFACE CARD/SYSTEM	$2,000
INTERFACE SWITCH CARD/SYSTEM	$600

COST = (5468+2600)*ROUNDUP(N/4,0)

EXAMPLE, FOR N DS1'S	N=	5
QUADS	2	$16,136
EQPT COST PER DS1		$3,227
FIBERS USED	8	

EXAMPLE, FOR N DS1'S	N=	12
QUADS	3	$24,204
EQPT COST PER DS1		$2,017
FIBERS USED	12	

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

FOR 13 TO 56 DS1'S, USE

DS3 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY: 28 DS1'S PER DS3 SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANSCEIVERS/SYSTEM	$3,972
CUST PRM COMMONS/SYSTEM	$13,400
HIGH SPEED INTERFACE CARD/SYSTEM	$2,200
HIGH SPEED INTERFACE SWITCH CARD/SYSTEM	$800
DS-1 CARD/FOUR DS-1'S, MAX=7/SYS	$705

TOTAL COST FOR N DS1'S =
ROUNDUP(N/28,0)*(3972+13400+2200+800)+ROUNDUP(N/4)*705

EXAMPLE, FOR N DS1'S	N=	13
HT'S (NO. OF SYSTEMS)	1	$3,972
CUST PREM COM	1	$13,400
H.S. INTERFACE CARDS	1	$2,200
H.S. INTERFACE SW. CARDS	1	$800
DS1 CARDS	4	$2,820
TOTAL FOR 24 DS1'S		$23,192
EQPT COST PER DS1		$1,784
FIBERS USED =	4	

EXAMPLE, FOR N DS1'S	N=	56
HT'S (NO. OF SYSTEMS)	2	$7,944
CUST PREM COM	2	$26,800
H.S. INTERFACE CARDS	2	$2,200
H.S. INTERFACE SW. CARDS	2	$800
DS1 CARDS	14	$9,870
TOTAL FOR 24 DS1'S		$50,614
EQPT COST PER DS1		$904
FIBERS USED	8	

INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

DS-1 SERVICE
FOR 57 OR MORE DS1'S USE

OC-3 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY - 84 DS1'S PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANSCEIVERS	$6,675
CUST PRM COMMONS	$31,745
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM	$2,400
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM	$1,000
DS-1 CARD PER FOUR DS-1'S, MAX OF 7,21*4=84	$738

TOTAL COST FOR N DS1'S=
ROUNDUP(N/84,0)*(6675+31745+2400+1000)+ROUNDUP(N/4,0)*738

EXAMPLE, FOR N DS1'S	N=	57
HT'S (NO. OF SYSTEMS)	1	$6,675
CUST PREM COM	1	$31,745
H.S. INTERFACE CARDS	1	$2,400
H.S. INTERFACE SW. CARDS	1	$1,000
DS1 CARDS	15	$11,070
TOTAL FOR 24 DS1'S		$52,890
EQPT COST PER DS1		$928
NUMBER OF FIBERS	4	

EXAMPLE, FOR N DS1'S	N=	85
HT'S (NO. OF SYSTEMS)	2	$13,350
CUST PREM COM	2	$63,490
H.S. INTERFACE CARDS	2	$4,800
H.S. INTERFACE SW. CARDS	2	$2,000
DS1 CARDS	22	$16,236
TOTAL FOR 24 DS1'S		$99,876
EQPT COST PER DS1		$1,175
NUMBER OF FIBERS	8	

EXAMPLE, FOR N DS1'S	N=	168
HT'S (NO. OF SYSTEMS)	2	$13,350
CUST PREM COM	2	$63,490
H.S. INTERFACE CARDS	2	$4,800
H.S. INTERFACE SW. CARDS	2	$2,000
DS1 CARDS	42	$30,996
TOTAL FOR 24 DS1'S		$114,636
EQPT COST PER DS1		$682
NUMBER OF FIBERS	8	

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

DS-3 SERVICE
FOR 1 TO 3 DS3'S USE

OC-3 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY: 3 DS3'S PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANSCEIVERS/SYSTEM	$6,675
CUSTOMER PREMISE COMMONS/SYSTEM	$31,745
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM	$2,400
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM	$1,000
DS3 CARD/DS3	$2,700

TOTAL, N DS3'S =
ROUNDUP(N/3,0)*(6675+31745+2400+1000)+(N*2700)

EXAMPLE, FOR N DS-3'S	N=	1
HT'S (NO. OF SYSTEMS)	1	$6,675
CUST PREM COM	1	$31,745
H. S. INTERFACE CARDS	1	$2,400
H. S. INTERFACE SW. CARDS	1	$1,000
DS-3 CARDS	1	$2,700
TOTAL FOR N DS-3'S		$44,520
COST PER DS-3		$44,520
FIBERS USED	4	

EXAMPLE, FOR N DS-3'S	N=	3
HT'S (NO. OF SYSTEMS)	1	$6,675
CUST PREM COM	1	$31,745
H. S. INTERFACE CARDS	1	$2,400
H. S. INTERFACE SW. CARDS	1	$1,000
DS-3 CARDS	3	$8,100
TOTAL FOR N DS-3'S		$49,920
COST PER DS-3		$16,640
FIBERS USED	4	

HI-CAP SERVICE EQUIPMENT COSTS
INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

FOR 4 TO 12 DS3'S, USE

OC-12 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY: 12 DS3'S PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANCEIVERS	1/SYSTEM	$7,875
CUST PREM COMMONS	1/SYSTEM	$40,737
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM		$2,500
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM		$1,200
DS3 CARD-FOUR DS3 PER CARD		$7,100

TOTAL, N DS3'S =
'ROUNDUP(N/12,0)*(7875+40737+2500+1200)+ROUNDUP(N/4,0)*7100

FOR 4 TO 12 DS3'S, CONTINUED

EXAMPLE, FOR N DS3'S	N=	4
HT'S (NO. OF SYSTEMS)=	1	$7,875
CUST PREM COMMONS	1	$40,737
H. S. INTERFACE CARDS	1	$2,500
H. S. INTERFACE SW. CARDS	1	$1,200
DS3 CARDS	1	$7,100
TOTAL FOR N DS3'S =		$55,712
COST PER DS3 =		$13,928
NUMBER OF FIBERS	4	

EXAMPLE, FOR N DS3'S	N=	12
HT'S (NO. OF SYSTEMS)=	1	$7,875
CUST PREM COMMONS	1	$40,737
H. S. INTERFACE CARDS	1	$2,500
H. S. INTERFACE SW. CARDS	1	$1,200
DS3 CARDS	3	$21,300
TOTAL FOR N DS3'S =		$69,912
COST PER DS3 =		$5,826
NUMBER OF FIBERS	4	

HI-CAP SERVICE EQUIPMENT COSTS
INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

DS-3 SERVICE
FOR 13 OR MORE DS3'S, USE

OC-48 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
CAPACITY: 48 DS3'S PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANCEIVERS	1/SYSTEM	$9,724
CUST PREM COMMONS	1/SYSTEM	$48,747
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM		$2,600
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM		$1,400
DS3 CARD, FOUR DS3' PER CARD		$7,100

TOTAL, N DS3'S =
'ROUNDUP(N/48,0)*(9724+48747+2600+1400)+ROUNDUP(N/4,0)*7100

EXAMPLE, FOR N DS3'S	N=	13
HT'S (NO. OF SYSTEMS)=	1	$9,724
CUST PREM COMMONS	1	$48,747
H. S. INTERFACE CARDS	1	$2,600
H. S. INTERFACE SW. CARDS	1	$1,400
DS3 CARDS	4	$28,400
TOTAL FOR N DS3'S =		$90,871
COST PER DS3 =		$6,990
NUMBER OF FIBERS	4	

FOR 4 TO 13 OR MORE DS3'S, CONTINUED

EXAMPLE, FOR N DS3'S	N=	48
HT'S (NO. OF SYSTEMS)=	1	$9,724
CUST PREM COMMONS	1	$48,747
H. S. INTERFACE CARDS	1	$2,600
H. S. INTERFACE SW. CARDS	1	$1,400
DS3 CARDS	12	$85,200
TOTAL FOR N DS3'S =		$147,671
COST PER DS3 =		$3,076
NUMBER OF FIBERS	4	

HI-CAP SERVICE EQUIPMENT COSTS
INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

OC-3 SERVICE

OC-3 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
ONE OC-3 CIRCUIT PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANSCEIVER	$6,675
CUST PREM COMS	$31,745
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM	$2,400
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM	$1,000
TOTAL	$41,820

EXAMPLE, FOR N OC-3 CIRCUITS	N=	4
HUB TRANSCEIVERS	4	$26,700
CUST PREM COMS	4	$126,980
H. S. INTERFACE CARDS	4	$2,400
H. S. INTERFACE SW. CARDS	4	$1,000
TOTAL		$157,080
COST PER OC-3		$39,270
NUMBER OF FIBER	16	

OC-12 SERVICE

OC-12 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
ONE OC-12 CIRCUIT PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANSCEIVER	$7,875
CUST PREM COMS	$40,737
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM	$2,500
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM	$1,200
TOTAL	$52,312

EXAMPLE, FOR N OC-12 CIRCUITS	N=	4
HUB TRANSCEIVERS	4	$31,500
CUST PREM COMS	4	$162,948
H. S. INTERFACE CARDS	4	$10,000
H. S. INTERFACE SW. CARDS	4	$4,800
TOTAL		$194,448
COST PER OC-12		$48,612
NUMBER OF FIBERS	16	

HI-CAP SERVICE EQUIPMENT COSTS
INCLUDING INSTALLATION

ONE CUSTOMER END PLUS INCREMENTAL CO/HUB COSTS

OC-48 SERVICE

OC-48 SYSTEM WITH AUTOMATIC ROUTE PROTECTION
ONE OC-48 CIRCUIT PER SYSTEM
4 FIBERS PER SYSTEM = 2 PRIMARY + 2 PROTECTION FIBERS

HUB TRANCEIVER	$9,274
CUST PREM COMMONS	$48,747
HIGH SPEED INTERFACE CARDS, 1 PER SYSTEM	$2,600
H. S. INTERFACE SWITCH CARDS, 1 PER SYSTEM	$1,400
TOTAL	$62,021

EXAMPLE, FOR N OC-48 CIRCUITS	N=	4
HUB TRANSCEIVERS	4	$37,096
CUST PREM COMS	4	$194,988
H. S. INTERFACE CARDS	4	$10,400
H. S. INTERFACE SW. CARDS	4	$5,600
TOTAL		$248,084
COST PER OC-3		$62,021
NUMBER OF FIBERS	16	

APPENDIX
DATA AND DATA SOURCES

D. TOTAL COSTS - FOR ALL LOCATIONS, BY BAND
EXCEL ® SPREADSHEET "TOTAL COST.XLS"

Phoenix Fiber Study
Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communicatio

DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
2	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
3	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
4	PHOENIX	7	3	0	0	0	11,000	66,056	77,056
5	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
6	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
7	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
8	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
9	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
10	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
11	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
12	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
13	PHOENIX	15	1	0	0	0	11,000	47,472	58,472
14	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
15	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
16	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
17	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
18	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
19	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
20	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
21	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
22	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
23	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
24	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
25	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
26	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
27	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
28	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
29	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
30	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
31	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
32	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
33	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
34	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
35	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
36	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
37	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
38	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
39	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
40	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
41	PHOENIX	2	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
42	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
43	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
44	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
45	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
46	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
47	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
48	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
49	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
50	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
51	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
52	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
53	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
54	SCOTSDAL	12	0	0	0	0	11,000	24,204	35,204
55	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
56	SCOTTSDA	1	0	0	0	0	11,000	5,468	16,468
57	PEORIA	1	0	0	0	0	11,000	5,468	16,468
58	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
59	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
60	SCOTTSDALE	27	1	0	0	0	11,000	49,686	60,686
61	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
62	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
63	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
64	GLENDALE	3	0	0	0	0	11,000	5,468	16,468
65	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
66	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
67	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
68	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
69	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
70	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
71	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
72	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
73	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
74	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
75	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
76	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
77	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
78	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
79	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
80	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
81	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
82	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
83	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
84	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
85	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
86	PHOENIX	13	1	0	0	0	11,000	47,472	58,472
87	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
88	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
89	PEORIA	1	0	0	0	0	11,000	5,468	16,468
90	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
91	PEORIA	2	0	0	0	0	11,000	5,468	16,468
92	SCOTTSDALE	9	0	0	0	0	11,000	24,204	35,204
93	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
94	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
95	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
96	PHOENIX	26	2	0	0	0	11,000	52,386	63,386
97	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
98	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
99	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
100	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
101	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
102	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
103	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
104	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
105	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
106	PEORIA	1	0	0	0	0	11,000	5,468	16,468
107	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
108	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
109	PEORIA	3	0	0	0	0	11,000	5,468	16,468
110	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
111	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
112	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
113	PEORIA	2	0	0	0	0	11,000	5,468	16,468
114	PEORIA	1	0	0	0	0	11,000	5,468	16,468
115	PEORIA	1	0	0	0	0	11,000	5,468	16,468
116	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
117	PHOENIX	19	0	0	0	0	11,000	23,897	34,897
118	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
119	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
120	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
121	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
122	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
123	PHOENIX	3	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
124	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
125	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
126	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
127	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
128	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
129	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
130	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
131	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
132	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
133	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
134	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
135	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
136	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
137	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
138	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
139	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
140	GLENDALE	5	0	0	0	0	11,000	16,136	27,136
141	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
142	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
143	GLENDALE	3	0	0	0	0	11,000	5,468	16,468
144	PEORIA	1	0	0	0	0	11,000	5,468	16,468
145	PEORIA	1	0	0	0	0	11,000	5,468	16,468
146	PEORIA	1	0	0	0	0	11,000	5,468	16,468
147	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
148	PHOENIX	16	10	0	0	0	11,000	76,564	87,564
149	PHOENIX	34	3	0	0	0	11,000	97,009	108,009
150	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
151	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
152	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
153	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
154	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
155	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
156	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
157	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
158	PHOENIX	21	0	0	0	0	11,000	24,602	35,602
159	PHOENIX	16	0	0	0	0	11,000	23,192	34,192
160	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
161	PEORIA	1	0	0	0	0	11,000	5,468	16,468
162	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
163	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
164	PHOENIX	3	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
165	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
166	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
167	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
168	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
169	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
170	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
171	PHOENIX	18	0	0	0	0	11,000	23,897	34,897
172	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
173	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
174	SCOTTSDALE	14	0	0	0	0	11,000	23,192	34,192
175	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
176	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
177	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
178	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
179	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
180	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
181	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
182	PARADISE VALLEY	1	0	0	0	0	11,000	5,468	16,468
183	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
184	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
185	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
186	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
187	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
188	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
189	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
190	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
191	SCOTTSDALE	12	0	0	0	0	11,000	24,204	35,204
192	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
193	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
194	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
195	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
196	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
197	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
198	PARADISE VALLE	1	0	0	0	0	11,000	5,468	16,468
199	GLENDALE	3	0	0	0	0	11,000	5,468	16,468
200	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
201	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
202	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
203	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
204	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
205	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
206	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
207	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
208	GLENDALE	3	0	0	0	0	11,000	5,468	16,468
209	GLENDALE	4	0	0	0	0	11,000	8,068	19,068
210	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
211	SCOTTSDALE	12	0	0	0	0	11,000	24,204	35,204
212	GLENDALE	6	0	0	0	0	11,000	16,136	27,136
213	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
214	GLENDALE	5	0	0	0	0	11,000	16,136	27,136
215	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
216	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
217	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
218	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
219	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
220	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
221	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
222	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
223	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
224	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
225	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
226	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
227	PARADISE VALLEY	3	0	0	0	0	11,000	5,468	16,468
228	PARADISE VALLEY	2	0	0	0	0	11,000	5,468	16,468
229	PARADISE VALLEY	6	0	0	0	0	11,000	16,136	27,136
230	PARADISE VALLEY	8	0	0	0	0	11,000	16,136	27,136
231	SCOTTSDALE	10	0	0	0	0	11,000	24,204	35,204
232	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
233	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
234	PARADISE VALLEY	1	0	0	0	0	11,000	5,468	16,468
235	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
236	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
237	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
238	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
239	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
240	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
241	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
242	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
243	PHOENIX	2	1	0	0	0	11,000	45,258	56,258
244	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
245	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
246	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
247	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
248	PARADISE VALLEY	2	0	0	0	0	11,000	5,468	16,468
249	GLENDALE	1	0	0	0	0	11,000	5,468	16,468
250	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
251	PARADISE VALLEY	1	0	0	0	0	11,000	5,468	16,468
252	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
253	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
254	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
255	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
256	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
257	GLENDALE	2	0	0	0	0	11,000	5,468	16,468
258	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
259	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
260	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
261	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
262	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
263	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
264	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
265	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
266	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
267	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
268	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
269	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
270	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
271	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
272	PHOENIX	7	2	0	0	0	11,000	48,696	59,696
273	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
274	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
275	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
276	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
277	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
278	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
279	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
280	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
281	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
282	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
283	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
284	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
285	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
286	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
287	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
288	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
289	PHOENIX	2	3	0	0	0	11,000	55,388	66,388
290	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
291	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
292	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
293	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
294	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
295	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
296	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
297	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
298	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
299	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
300	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
301	PHOENIX	25	0	0	0	0	11,000	25,307	36,307
302	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
303	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
304	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
305	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
306	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
307	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
308	PHOENIX	23	0	0	0	0	11,000	24,602	35,602
309	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
310	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
311	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
312	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
313	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
314	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
315	PHOENIX	28	0	0	0	0	11,000	25,307	36,307
316	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
317	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
318	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
319	PHOENIX	17	0	0	0	0	11,000	23,897	34,897
320	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
321	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
322	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
323	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
324	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
325	PHOENIX	11	3	0	0	0	11,000	74,124	85,124
326	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
327	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
328	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
329	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
330	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
331	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
332	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
333	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
334	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
335	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
336	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
337	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
338	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
339	PHOENIX	2	1	0	0	0	11,000	45,258	56,258
340	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
341	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
342	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
343	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
344	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
345	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
346	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
347	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
348	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
349	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
350	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
351	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
352	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
353	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
354	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
355	PHOENIX	42	5	0	0	0	11,000	94,870	105,870
356	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
357	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
358	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
359	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
360	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
361	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
362	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
363	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
364	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
365	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
366	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
367	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
368	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
369	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
370	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
371	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
372	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
373	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
374	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
375	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
376	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
377	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
378	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
379	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
380	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
381	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
382	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
383	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
384	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
385	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
386	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
387	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
388	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
389	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
390	PHOENIX	165	5	0	0	0	11,000	181,148	192,148
391	PHOENIX	0	11	0	0	0	11,000	73,612	84,612
392	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
393	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
394	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
395	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
396	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
397	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
398	PHOENIX	808	65	0	0	0	11,000	812,918	823,918
399	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
400	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
401	PHOENIX	101	29	0	0	0	11,000	180,279	191,279
402	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
403	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
404	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
405	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
406	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
407	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
408	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
409	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
410	PHOENIX	2	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
411	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
412	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
413	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
414	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
415	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
416	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
417	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
418	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
419	PHOENIX	35	1	0	0	0	11,000	51,162	62,162
420	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
421	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
422	PHOENIX	418	25	0	0	0	11,000	398,761	409,761
423	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
424	PHOENIX	134	0	0	0	0	11,000	108,732	119,732
425	PHOENIX	48	29	0	0	0	11,000	148,334	159,334
426	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
427	PHOENIX	0	0	0	0	3	11,000	186,063	197,063
428	PHOENIX	13	2	0	0	0	11,000	50,172	61,172
429	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
430	PHOENIX	7	3	0	0	0	11,000	66,056	77,056
431	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
432	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
433	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
434	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
435	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
436	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
437	PHOENIX	18	0	0	0	0	11,000	23,897	34,897
438	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
439	PHOENIX	21	0	0	0	0	11,000	24,602	35,602
440	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
441	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
442	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
443	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
444	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
445	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
446	PHOENIX	23	0	0	0	0	11,000	24,602	35,602
447	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
448	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
449	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
450	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
451	PHOENIX	21	0	0	0	0	11,000	24,602	35,602

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
452	PHOENIX	23	4	0	0	0	11,000	63,840	74,840
453	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
454	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
455	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
456	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
457	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
458	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
459	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
460	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
461	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
462	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
463	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
464	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
465	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
466	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
467	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
468	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
469	PHOENIX	22	0	0	0	0	11,000	24,602	35,602
470	SCOTTSDALE	4	1	0	0	0	11,000	45,258	56,258
471	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
472	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
473	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
474	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
475	PHOENIX	23	0	0	0	0	11,000	24,602	35,602
476	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
477	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
478	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
479	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
480	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
481	PHOENIX	23	0	0	0	0	11,000	24,602	35,602
482	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
483	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
484	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
485	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
486	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
487	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
488	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
489	SCOTTSDALE	5	0	0	0	0	11,000	16,136	27,136
490	SCOTTSDALE	7	0	0	0	0	11,000	16,136	27,136
491	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
492	PHOENIX	4	0	0	0	0	11,000	8,068	19,068

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
493	PHOENIX	500	0	0	0	0	11,000	343,170	354,170
494	PHOENIX	16	1	0	0	0	11,000	47,472	58,472
495	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
496	PHOENIX	0	0	0	0	1	11,000	62,021	73,021
497	PHOENIX	94	74	0	0	0	11,000	319,374	330,374
498	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
499	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
500	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
501	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
502	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
503	PHOENIX	262	18	0	0	0	11,000	313,959	324,959
504	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
505	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
506	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
507	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
508	PHOENIX	6	5	0	0	0	11,000	67,988	78,988
509	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
510	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
511	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
512	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
513	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
514	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
515	PHOENIX	31	0	0	0	0	11,000	46,384	57,384
516	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
517	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
518	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
519	PHOENIX	9	1	0	0	0	11,000	46,734	57,734
520	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
521	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
522	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
523	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
524	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
525	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
526	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
527	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
528	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
529	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
530	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
531	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
532	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
533	PHOENIX	3	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
534	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
535	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
536	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
537	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
538	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
539	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
540	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
541	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
542	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
543	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
544	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
545	PHOENIX	31	0	0	0	0	11,000	46,384	57,384
546	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
547	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
548	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
549	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
550	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
551	PHOENIX	37	0	0	0	0	11,000	47,794	58,794
552	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
553	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
554	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
555	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
556	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
557	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
558	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
559	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
560	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
561	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
562	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
563	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
564	PHOENIX	9	1	0	0	0	11,000	46,734	57,734
565	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
566	PHOENIX	8	1	0	0	0	11,000	45,996	56,996
567	PHOENIX	34	0	0	0	0	11,000	47,089	58,089
568	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
569	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
570	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
571	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
572	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
573	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
574	PHOENIX	3	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
575	PHOENIX	14	1	0	0	0	11,000	47,472	58,472
576	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
577	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
578	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
579	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
580	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
581	SCOTTSDALE	4	0	0	0	0	11,000	8,068	19,068
582	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
583	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
584	PHOENIX	16	0	0	0	0	11,000	23,192	34,192
585	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
586	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
587	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
588	PHOENIX	26	0	0	0	0	11,000	25,307	36,307
589	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
590	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
591	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
592	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
593	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
594	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
595	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
596	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
597	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
598	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
599	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
600	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
601	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
602	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
603	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
604	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
605	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
606	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
607	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
608	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
609	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
610	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
611	PHNX	1	0	0	0	0	11,000	5,468	16,468
612	PHOENIX	151	7	0	0	0	11,000	178,196	189,196
613	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
614	PHOENIX	229	0	0	0	0	11,000	168,264	179,264
615	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
616	PHOENIX	57	17	0	0	0	11,000	149,521	160,521
617	PHOENIX	1	1	0	0	0	11,000	45,258	56,258
618	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
619	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
620	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
621	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
622	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
623	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
624	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
625	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
626	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
627	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
628	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
629	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
630	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
631	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
632	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
633	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
634	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
635	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
636	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
637	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
638	SCOTTSDALE	6	0	0	0	0	11,000	16,136	27,136
639	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
640	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
641	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
642	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
643	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
644	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
645	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
646	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
647	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
648	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
649	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
650	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
651	PHOENIX	48	1	0	0	0	11,000	53,376	64,376
652	PHOENIX	0	0	1	0	0	11,000	41,820	52,820
653	PHOENIX	67	11	0	0	0	11,000	126,572	137,572
654	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
655	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
656	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
657	TEMPE	2	0	0	0	0	11,000	5,468	16,468
658	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
659	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
660	MESA	1	0	0	0	0	11,000	5,468	16,468
661	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
662	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
663	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
664	SCOTTSDALE	2	0	0	0	0	11,000	5,468	16,468
665	SCOTTSDALE	39	0	0	0	0	11,000	47,794	58,794
666	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
667	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
668	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
669	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
670	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
671	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
672	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
673	SCOTTSDALE	3	0	0	0	0	11,000	5,468	16,468
674	TOLLESON	2	0	0	0	0	11,000	5,468	16,468
675	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
676	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
677	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
678	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
679	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
680	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
681	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
682	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
683	MESA	2	0	0	0	0	11,000	5,468	16,468
684	MESA	14	0	0	0	0	11,000	23,192	34,192
685	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
686	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
687	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
688	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
689	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
690	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
691	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
692	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
693	AVONDALE	3	0	0	0	0	11,000	5,468	16,468
694	PHOENIX	36	0	0	0	0	11,000	47,089	58,089
695	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
696	PHOENIX	0	0	2	0	0	11,000	83,640	94,640
697	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
698	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
699	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
700	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
701	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
702	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
703	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
704	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
705	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
706	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
707	CHANDLER	4	0	0	0	0	11,000	8,068	19,068
708	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
709	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
710	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
711	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
712	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
713	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
714	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
715	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
716	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
717	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
718	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
719	SCOTTSDALE	1	0	0	0	0	11,000	5,468	16,468
720	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
721	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
722	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
723	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
724	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
725	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
726	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
727	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
728	SCOTTSDALE	5	0	0	0	0	11,000	16,136	27,136
729	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
730	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
731	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
732	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
733	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
734	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
735	PHOENIX	245	27	0	0	0	11,000	283,387	294,387
736	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
737	PHOENIX	8	4	0	0	0	11,000	60,888	71,888
738	PHOENIX	12	1	0	0	0	11,000	46,734	57,734

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
739	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
740	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
741	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
742	PHNX	1	0	0	0	0	11,000	5,468	16,468
743	PHNX	6	0	0	0	0	11,000	16,136	27,136
744	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
745	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
746	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
747	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
748	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
749	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
750	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
751	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
752	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
753	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
754	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
755	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
756	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
757	PHNX	22	0	0	0	0	11,000	24,602	35,602
758	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
759	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
760	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
761	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
762	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
763	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
764	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
765	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
766	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
767	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
768	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
769	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
770	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
771	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
772	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
773	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
774	AVONDALE	1	0	0	0	0	11,000	5,468	16,468
775	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
776	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
777	PHOENIX	7	2	0	0	0	11,000	48,696	59,696
778	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
779	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
Cost Model - Competitive Access Providers
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
780	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
781	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
782	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
783	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
784	PHOENIX	27	0	0	0	0	11,000	25,307	36,307
785	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
786	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
787	PHOENIX	20	1	0	0	0	11,000	48,210	59,210
788	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
789	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
790	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
791	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
792	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
793	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
794	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
795	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
796	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
797	PHOENIX	0	0	0	14	0	11,000	732,368	743,368
798	PHOENIX	2621	0	0	0	0	11,000	1,822,368	1,833,368
799	PHOENIX	0	0	12	0	0	11,000	501,840	512,840
800	PHOENIX	332	0	0	0	0	11,000	228,534	239,534
801	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
802	ST PHOENIX AZ	7	4	0	0	0	11,000	60,888	71,888
803	PHOENIX	0	0	0	0	6	11,000	372,126	383,126
804	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
805	PHOENIX	2	1	0	0	0	11,000	45,258	56,258
806	PHOENIX	352	43	0	0	0	11,000	372,795	383,795
807	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
808	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
809	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
810	PHOENIX	10	2	0	0	0	11,000	49,434	60,434
811	PHOENIX	561	218	0	0	0	11,000	1,099,653	1,110,653
812	ST PHOENIX AZ	2	0	0	0	0	11,000	5,468	16,468
813	PHOENIX	26	0	0	0	0	11,000	25,307	36,307
814	PHOENIX	48	0	0	0	0	11,000	49,204	60,204
815	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
816	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
817	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
818	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
819	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
820	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
821	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
822	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
823	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
824	PHOENIX	9	0	0	0	0	11,000	24,204	35,204
825	PHOENIX	7	0	0	0	0	11,000	16,136	27,136
826	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
827	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
828	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
829	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
830	PHOENIX	13	1	0	0	0	11,000	47,472	58,472
831	PHOENIX	66	8	0	0	0	11,000	119,472	130,472
832	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
833	TOLLESON	2	0	0	0	0	11,000	5,468	16,468
834	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
835	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
836	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
837	PHOENIX	35	0	0	0	0	11,000	47,089	58,089
838	PHOENIX	14	0	0	0	0	11,000	23,192	34,192
839	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
840	PHOENIX	20	0	0	0	0	11,000	23,897	34,897
841	PHOENIX	12	1	0	0	0	11,000	46,734	57,734
842	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
843	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
844	TEMPE	0	1	0	0	0	11,000	44,520	55,520
845	TEMPE	1	0	0	0	0	11,000	5,468	16,468
846	TEMPE	45	1	0	0	0	11,000	53,376	64,376
847	TEMPE	1	0	0	0	0	11,000	5,468	16,468
848	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
849	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
850	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
851	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
852	TEMPE	27	0	0	0	0	11,000	25,307	36,307
853	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
854	PHOENIX	2	2	0	0	0	11,000	47,958	58,958
855	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
856	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
857	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
858		0	0	1	0	0	11,000	41,820	52,820
859	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
860	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
861	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
862	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
863	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
864	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
865	PHOENIX	51	4	0	0	0	11,000	69,006	80,006
866	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
867	PHOENIX	55	0	0	0	0	11,000	50,614	61,614
868	PHOENIX	5	1	0	0	0	11,000	45,996	56,996
869	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
870	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
871	PHOENIX	16	0	0	0	0	11,000	23,192	34,192
872	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
873	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
874	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
875	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
876	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
877	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
878	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
879	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
880	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
881	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
882	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
883	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
884	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
885	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
886	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
887	PHOENIX	29	2	0	0	0	11,000	73,463	84,463
888	PHOENIX	591	0	0	0	0	11,000	443,784	454,784
889	PHOENIX	197	42	0	0	0	11,000	302,931	313,931
890	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
891	PHNX	3	0	0	0	0	11,000	5,468	16,468
892	PHOENIX	98	1	0	0	0	11,000	103,351	114,351
893	PHNX	5	0	0	0	0	11,000	16,136	27,136
894	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
895	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
896	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
897	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
898	PHOENIX	42	4	0	0	0	11,000	67,530	78,530
899	PHOENIX	30	3	0	0	0	11,000	96,304	107,304
900	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
901	PHOENIX	0	0	0	0	1	11,000	62,021	73,021
902	PHOENIX	999	74	0	0	0	11,000	946,182	957,182

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
903	PHOENIX	21	0	0	0	0	11,000	24,602	35,602
904	PHOENIX	6	7	0	0	0	11,000	67,988	78,988
905	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
906	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
907	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
908	PHOENIX	0	3	0	0	0	11,000	49,920	60,920
909	PHOENIX	1	1	0	0	0	11,000	45,258	56,258
910	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
911	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
912	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
913	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
914	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
915	FLORENCE	2	0	0	0	0	11,000	5,468	16,468
916	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
917	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
918	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
919	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
920	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
921	PHOENIX	17	0	0	0	0	11,000	23,897	34,897
922	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
923	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
924	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
925	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
926	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
927	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
928	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
929	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
930	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
931	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
932	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
933	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
934	TEMPE	1	0	0	0	0	11,000	5,468	16,468
935	TEMPE	32	0	0	0	0	11,000	46,384	57,384
936	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
937	TEMPE	2	0	0	0	0	11,000	5,468	16,468
938	TEMPE	18	0	0	0	0	11,000	23,897	34,897
939	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
940	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
941	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
942	TEMPE	1	0	0	0	0	11,000	5,468	16,468
943	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
944	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
945	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
946	TEMPE	3	0	0	0	0	11,000	5,468	16,468
947	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
948	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
949	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
950	TEMPE	0	1	0	0	0	11,000	44,520	55,520
951	TEMPE	7	2	0	0	0	11,000	48,696	59,696
952	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
953	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
954	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
955	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
956	TEMPE	1	0	0	0	0	11,000	5,468	16,468
957	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
958	TEMPE	1	0	0	0	0	11,000	5,468	16,468
959	TEMPE	10	0	0	0	0	11,000	24,204	35,204
960	MESA	3	0	0	0	0	11,000	5,468	16,468
961	TEMPE	6	0	0	0	0	11,000	16,136	27,136
962	TEMPE	1	0	0	0	0	11,000	5,468	16,468
963	TEMPE	1	0	0	0	0	11,000	5,468	16,468
964	TEMPE	7	0	0	0	0	11,000	16,136	27,136
965	TEMPE	1	0	0	0	0	11,000	5,468	16,468
966	TEMPE	134	6	0	0	0	11,000	175,244	186,244
967	TEMPE	5	0	0	0	0	11,000	16,136	27,136
968	TEMPE	1	0	0	0	0	11,000	5,468	16,468
969	TEMPE	19	1	0	0	0	11,000	48,210	59,210
970	TEMPE	2	0	0	0	0	11,000	5,468	16,468
971	TEMPE	2	0	0	0	0	11,000	5,468	16,468
972	TEMPE	1	0	0	0	0	11,000	5,468	16,468
973	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
974	TEMPE	0	2	0	0	0	11,000	47,220	58,220
975	TEMPE	2	0	0	0	0	11,000	5,468	16,468
976	TEMPE	3	0	0	0	0	11,000	5,468	16,468
977	TEMPE	1	0	0	0	0	11,000	5,468	16,468
978	TEMPE	1	0	0	0	0	11,000	5,468	16,468
979	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
980	TEMPE	2	0	0	0	0	11,000	5,468	16,468
981	TEMPE	5	0	0	0	0	11,000	16,136	27,136
982	TEMPE	10	0	0	0	0	11,000	24,204	35,204
983	TEMPE	1	0	0	0	0	11,000	5,468	16,468
984	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
985	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
986	PHOENIX	21	0	0	0	0	11,000	24,602	35,602
987	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
988	TEMPE	1	0	0	0	0	11,000	5,468	16,468
989	MESA	1	0	0	0	0	11,000	5,468	16,468
990	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
991	TEMPE	2	0	0	0	0	11,000	5,468	16,468
992	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
993	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
994	MESA	1	0	0	0	0	11,000	5,468	16,468
995	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
996	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
997	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
998	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
999	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1000	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1001	MESA	4	0	0	0	0	11,000	8,068	19,068
1002	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1003	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1004	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1005	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1006	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1007	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
1008	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1009	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1010	MESA	1	0	0	0	0	11,000	5,468	16,468
1011	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1012	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1013	MESA	1	0	0	0	0	11,000	5,468	16,468
1014	TEMPE	43	2	0	0	0	11,000	75,578	86,578
1015	PHOENIX	10	0	0	0	0	11,000	24,204	35,204
1016	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1017	MESA	6	0	0	0	0	11,000	16,136	27,136
1018	MESA	14	4	0	0	0	11,000	62,364	73,364
1019	MESA	467	36	0	0	0	11,000	463,637	474,637
1020	MESA	0	0	0	3	0	11,000	156,936	167,936
1021	MESA	19	0	0	0	0	11,000	23,897	34,897
1022	MESA	1	0	0	0	0	11,000	5,468	16,468
1023	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1024	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1025	TEMPE	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
Cost Model - Competitive Access Providers
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1026	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1027	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1028	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1029	TEMPE	4	1	0	0	0	11,000	45,258	56,258
1030	TEMPE	8	5	0	0	0	11,000	67,988	78,988
1031	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1032	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1033	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1034	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1035	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1036	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1037	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1038	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1039	CHANDLER	3	0	0	0	0	11,000	5,468	16,468
1040	CHANDLER	4	1	0	0	0	11,000	45,258	56,258
1041	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1042	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1043	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1044	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1045	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1046	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1047	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1048	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1049	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1050	PHOENIX	0	1	0	0	0	11,000	44,520	55,520
1051	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1052	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1053	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1054	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1055	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1056	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1057	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1058	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1059	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1060	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1061	TEMPE	5	0	0	0	0	11,000	16,136	27,136
1062	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1063	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1064	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1065	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1066	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1067	PHOENIX	21	0	0	0	0	11,000	24,602	35,602
1068	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1069	TEMPE	4	1	0	0	0	11,000	45,258	56,258
1070	PHOENIX	13	0	0	0	0	11,000	23,192	34,192
1071	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1072	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1073	MESA	15	3	0	0	0	11,000	73,112	84,112
1074	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1075	MESA	1	0	0	0	0	11,000	5,468	16,468
1076	MESA	3	0	0	0	0	11,000	5,468	16,468
1077	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1078	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1079	MESA	2	0	0	0	0	11,000	5,468	16,468
1080	MESA	1	0	0	0	0	11,000	5,468	16,468
1081	MESA	4	0	0	0	0	11,000	8,068	19,068
1082	MESA	1	0	0	0	0	11,000	5,468	16,468
1083	MESA	1	0	0	0	0	11,000	5,468	16,468
1084	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1085	MESA	1	0	0	0	0	11,000	5,468	16,468
1086	MESA	1	0	0	0	0	11,000	5,468	16,468
1087	MESA	1	0	0	0	0	11,000	5,468	16,468
1088	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1089	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1090	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1091	PHOENIX	18	0	0	0	0	11,000	23,897	34,897
1092	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1093	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1094	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1095	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1096	PHOENIX	42	1	0	0	0	11,000	52,638	63,638
1097	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1098	TEMPE	13	2	0	0	0	11,000	50,172	61,172
1099	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1100	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1101	TEMPE	32	0	0	0	0	11,000	46,384	57,384
1102	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1103	TEMPE	5	0	0	0	0	11,000	16,136	27,136
1104	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1105	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1106	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1107	MESA	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1108	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1109	GILBERT	20	1	0	0	0	11,000	48,210	59,210
1110	MESA	1	0	0	0	0	11,000	5,468	16,468
1111	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1112	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1113	TEMPE	14	0	0	0	0	11,000	23,192	34,192
1114	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1115	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1116	MESA	1	0	0	0	0	11,000	5,468	16,468
1117	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1118	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1119	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1120	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1121	MESA	2	0	0	0	0	11,000	5,468	16,468
1122	MESA	1	0	0	0	0	11,000	5,468	16,468
1123	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1124	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1125	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1126	MESA	1	0	0	0	0	11,000	5,468	16,468
1127	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1128	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1129	MESA	3	0	0	0	0	11,000	5,468	16,468
1130	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1131	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1132	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1133	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1134	TEMPE	8	0	0	0	0	11,000	16,136	27,136
1135	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1136	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1137	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1138	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1139	PHOENIX	36	1	0	0	0	11,000	51,162	62,162
1140	TEMPE	11	0	0	0	0	11,000	24,204	35,204
1141	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1142	PHOENIX	18	0	0	0	0	11,000	23,897	34,897
1143	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1144	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1145	PHOENIX	1	2	0	0	0	11,000	47,958	58,958
1146	MESA	1	0	0	0	0	11,000	5,468	16,468
1147	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1148	CHANDLER	2	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1149	MESA	1	0	0	0	0	11,000	5,468	16,468
1150	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1151	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1152	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1153	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1154	MESA	1	0	0	0	0	11,000	5,468	16,468
1155	MESA	1	0	0	0	0	11,000	5,468	16,468
1156	MESA	1	0	0	0	0	11,000	5,468	16,468
1157	MESA	1	0	0	0	0	11,000	5,468	16,468
1158	MESA	1	0	0	0	0	11,000	5,468	16,468
1159	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1160	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1161	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1162	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1163	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1164	TEMPE	7	0	0	0	0	11,000	16,136	27,136
1165	MESA	1	0	0	0	0	11,000	5,468	16,468
1166	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1167	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1168	MESA	1	0	0	0	0	11,000	5,468	16,468
1169	MESA	1	0	0	0	0	11,000	5,468	16,468
1170	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1171	TEMPE	5	0	0	0	0	11,000	16,136	27,136
1172	TEMPE	7	0	0	0	0	11,000	16,136	27,136
1173	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1174	MESA	1	0	0	0	0	11,000	5,468	16,468
1175	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1176	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1177	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1178	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1179	MESA	1	0	0	0	0	11,000	5,468	16,468
1180	TEMPE	7	0	0	0	0	11,000	16,136	27,136
1181	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1182	MESA	1	0	0	0	0	11,000	5,468	16,468
1183	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1184	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1185	TEMPE	18	0	0	0	0	11,000	23,897	34,897
1186	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1187	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1188	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1189	TEMPE	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1190	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1191	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1192	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1193	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1194	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1195	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1196	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1197	MESA	1	0	0	0	0	11,000	5,468	16,468
1198	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1199	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1200	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1201	TEMPE	9	0	0	0	0	11,000	24,204	35,204
1202	CHANDLER	4	0	0	0	0	11,000	8,068	19,068
1203	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1204	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1205	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1206	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1207	PHOENIX	8	0	0	0	0	11,000	16,136	27,136
1208	PHOENIX	24	0	0	0	0	11,000	24,602	35,602
1209	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1210	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1211	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1212	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1213	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1214	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1215	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1216	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1217	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1218	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1219	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1220	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1221	TEMPE	49	2	0	0	0	11,000	76,988	87,988
1222	TEMPE	8	1	0	0	0	11,000	45,996	56,996
1223	TEMPE	57	5	0	0	0	11,000	118,062	129,062
1224	TEMPE	16	0	0	0	0	11,000	23,192	34,192
1225	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1226	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1227	TEMPE	11	0	0	0	0	11,000	24,204	35,204
1228	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1229	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1230	TEMPE	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1231	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1232	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1233	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1234	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1235	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1236	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1237	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1238	CHANDLER	21	0	0	0	0	11,000	24,602	35,602
1239	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1240	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1241	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1242	MESA	1	0	0	0	0	11,000	5,468	16,468
1243	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1244	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1245	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1246	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1247	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1248	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1249	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1250	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1251	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1252	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1253	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1254	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1255	TEMPE	7	0	0	0	0	11,000	16,136	27,136
1256	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1257	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1258	TEMPE	27	0	0	0	0	11,000	25,307	36,307
1259	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1260	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1261	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1262	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1263	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1264	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1265	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1266	TEMPE	12	0	0	0	0	11,000	24,204	35,204
1267	TEMPE	24	1	0	0	0	11,000	48,948	59,948
1268	TEMPE	8	0	0	0	0	11,000	16,136	27,136
1269	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1270	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1271	TEMPE	1	0	0	0	0	11,000	5,468	16,468

Phoenix Fiber Study
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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1272	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1273	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1274	TEMPE	8	0	0	0	0	11,000	16,136	27,136
1275	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1276	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1277	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1278	TEMPE	8	0	0	0	0	11,000	16,136	27,136
1279	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1280	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1281	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1282	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1283	PHOENIX	0	0	0	1	0	11,000	52,312	63,312
1284	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1285	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1286	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1287	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1288	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1289	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1290	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1291	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1292	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1293	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1294	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1295	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1296	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1297	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1298	TEMPE	6	0	0	0	0	11,000	16,136	27,136
1299	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1300	MESA	1	0	0	0	0	11,000	5,468	16,468
1301	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1302	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1303	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1304	TEMPE	24	0	0	0	0	11,000	24,602	35,602
1305	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1306	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1307	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1308	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1309	TEMPE	17	0	0	0	0	11,000	23,897	34,897
1310	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1311	TEMPE	6	0	0	0	0	11,000	16,136	27,136
1312	MESA	2	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1313	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1314	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1315	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1316	TEMPE	5	0	0	0	0	11,000	16,136	27,136
1317	MESA	33	0	0	0	0	11,000	47,089	58,089
1318	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1319	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1320	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
1321	MESA	7	0	0	0	0	11,000	16,136	27,136
1322	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1323	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1324	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1325	PHOENIX	7	1	0	0	0	11,000	45,996	56,996
1326	MESA	1	0	0	0	0	11,000	5,468	16,468
1327	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1328	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1329	MESA	2	0	0	0	0	11,000	5,468	16,468
1330	MESA	1	0	0	0	0	11,000	5,468	16,468
1331	MESA	1	0	0	0	0	11,000	5,468	16,468
1332	MESA	1	0	0	0	0	11,000	5,468	16,468
1333	MESA	5	0	0	0	0	11,000	16,136	27,136
1334	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1335	MESA	1	0	0	0	0	11,000	5,468	16,468
1336	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1337	MESA	1	0	0	0	0	11,000	5,468	16,468
1338	MESA	1	0	0	0	0	11,000	5,468	16,468
1339	MESA	1	0	0	0	0	11,000	5,468	16,468
1340	MESA	1	0	0	0	0	11,000	5,468	16,468
1341	MESA	1	0	0	0	0	11,000	5,468	16,468
1342	MESA	1	0	0	0	0	11,000	5,468	16,468
1343	APACHE JUNCTION	5	0	0	0	0	11,000	16,136	27,136
1344	MESA	3	0	0	0	0	11,000	5,468	16,468
1345	APACHE JUNCTION	1	0	0	0	0	11,000	5,468	16,468
1346	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1347	MESA	1	0	0	0	0	11,000	5,468	16,468
1348	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1349	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1350	CHANDLER	12	0	0	0	0	11,000	24,204	35,204
1351	MESA	3	0	0	0	0	11,000	5,468	16,468
1352	MESA	4	0	0	0	0	11,000	8,068	19,068
1353	PHOENIX	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1354	TEMPE	7	0	0	0	0	11,000	16,136	27,136
1355	MESA	2	0	0	0	0	11,000	5,468	16,468
1356	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1357	TEMPE	8	0	0	0	0	11,000	16,136	27,136
1358	MESA	3	0	0	0	0	11,000	5,468	16,468
1359	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1360	MESA	4	0	0	0	0	11,000	8,068	19,068
1361	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1362	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1363	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1364	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1365	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1366	TEMPE	4	0	0	0	0	11,000	8,068	19,068
1367	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1368	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1369	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1370	MESA	1	0	0	0	0	11,000	5,468	16,468
1371	MESA	2	0	0	0	0	11,000	5,468	16,468
1372	MESA	1	0	0	0	0	11,000	5,468	16,468
1373	MESA	1	0	0	0	0	11,000	5,468	16,468
1374	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1375	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1376	MESA	2	0	0	0	0	11,000	5,468	16,468
1377	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1378	MESA	3	0	0	0	0	11,000	5,468	16,468
1379	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1380	MESA	1	0	0	0	0	11,000	5,468	16,468
1381	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1382	TEMPE	10	0	0	0	0	11,000	24,204	35,204
1383	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1384	TEMPE	9	0	0	0	0	11,000	24,204	35,204
1385	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1386	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1387	GILBERT	5	0	0	0	0	11,000	16,136	27,136
1388	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1389	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1390	MESA	4	0	0	0	0	11,000	8,068	19,068
1391	MESA	1	0	0	0	0	11,000	5,468	16,468
1392	MESA	1	0	0	0	0	11,000	5,468	16,468
1393	MESA	8	0	0	0	0	11,000	16,136	27,136
1394	TEMPE	2	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1395	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1396	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1397	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1398	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1399	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1400	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1401	GILBERT	3	0	0	0	0	11,000	5,468	16,468
1402	GILBERT	2	0	0	0	0	11,000	5,468	16,468
1403	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1404	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1405	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1406	PHOENIX	11	0	0	0	0	11,000	24,204	35,204
1407	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1408	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1409	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1410	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1411	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1412	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1413	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1414	TEMPE	18	3	0	0	0	11,000	73,817	84,817
1415	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1416	GILBERT	1	0	0	0	0	11,000	5,468	16,468
1417	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1418	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1419	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1420	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1421	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1422	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1423	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1424	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1425	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1426	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1427	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1428	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1429	PHOENIX	6	0	0	0	0	11,000	16,136	27,136
1430	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1431	PHOENIX	5	0	0	0	0	11,000	16,136	27,136
1432	PHOENIX	3	0	0	0	0	11,000	5,468	16,468
1433	GILBERT	5	0	0	0	0	11,000	16,136	27,136
1434	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1435	PHOENIX	15	1	0	0	0	11,000	47,472	58,472

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1436	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1437	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1438	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1439	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1440	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1441	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1442	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1443	GILBERT	4	0	0	0	0	11,000	8,068	19,068
1444	GILBERT	2	0	0	0	0	11,000	5,468	16,468
1445	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1446	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1447	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1448	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1449	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1450	TEMPE	3	0	0	0	0	11,000	5,468	16,468
1451	TEMPE	14	0	0	0	0	11,000	23,192	34,192
1452	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1453	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1454	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1455	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1456	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1457	TEMPE	5	0	0	0	0	11,000	16,136	27,136
1458	PHOENIX	4	0	0	0	0	11,000	8,068	19,068
1459	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1460	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1461	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1462	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1463	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1464	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1465	TEMPE	2	0	0	0	0	11,000	5,468	16,468
1466	TEMPE	1	0	0	0	0	11,000	5,468	16,468
1467	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1468	CHANDLER	3	0	0	0	0	11,000	5,468	16,468
1469	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1470	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1471	CHANDLER	4	0	0	0	0	11,000	8,068	19,068
1472	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1473	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1474	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1475	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1476	CHANDLER	1	0	0	0	0	11,000	5,468	16,468

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DISTANCE BAND 1: 0 TO 1,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1477	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1478	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1479	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1480	CHANDLER	3	0	0	0	0	11,000	5,468	16,468
1481	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1482	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1483	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1484	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1485	CHANDLER	4	2	0	0	0	11,000	47,958	58,958
1486		0	0	1	0	0	11,000	41,820	52,820
1487		0	0	0	1	0	11,000	52,312	63,312
1488	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1489	CHANDLER	0	1	0	0	0	11,000	44,520	55,520
1490	CHANDLER	8	0	0	0	0	11,000	16,136	27,136
1491	CHANDLER	22	2	0	0	0	11,000	51,648	62,648
1492	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1493	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1494	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1495	CHANDLER	3	0	0	0	0	11,000	5,468	16,468
1496	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1497	PHOENIX	2	0	0	0	0	11,000	5,468	16,468
1498	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1499	PHOENIX	1	0	0	0	0	11,000	5,468	16,468
1500	CHANDLER	3	0	0	0	0	11,000	5,468	16,468
1501	CHANDLER	9	0	0	0	0	11,000	24,204	35,204
1502	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1503	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1504	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1505	CHANDLER	2	0	0	0	0	11,000	5,468	16,468
1506	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1507	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
1508	CHANDLER	1	0	0	0	0	11,000	5,468	16,468
				Sub-Totals			$16,588,000	$28,043,239	

# in this Study	3101	Sum of Total Cost	$44,631,239
# in this Band	1508	Average of Total Cost	$29,596
		% of Addresses in this Band	48.63%

Phoenix Fiber Study
Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communications

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
2	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
3	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
4	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
5	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
6	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
7	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
8	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
9	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
10	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
11	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
12	PHOENIX	13	0	0	0	0	24,000	23,192	47,192
13	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
14	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
15	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
16	PHOENIX	1	1	0	0	0	24,000	45,258	69,258
17	PHOENIX	8	0	0	0	0	24,000	16,136	40,136
18	PHOENIX	10	0	0	0	0	24,000	24,204	48,204
19	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
20	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
21	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
22	PHOENIX	6	0	0	0	0	24,000	16,136	40,136
23	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
24	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
25	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
26	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
27	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
28	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
29	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
30	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
31	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
32	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
33	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
34	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
35	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
36	PHOENIX	6	0	0	0	0	24,000	16,136	40,136
37	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
38	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
39	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
40	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
41	GLENDALE	1	0	0	0	0	24,000	5,468	29,468

Phoenix Fiber Study
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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
42	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
43	SCOTTSDALE	5	0	0	0	0	24,000	16,136	40,136
44	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
45	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
46	SCOTTSDALE	5	0	0	0	0	24,000	16,136	40,136
47	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
48	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
49	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
50	PEORIA	2	0	0	0	0	24,000	5,468	29,468
51	PEORIA	2	0	0	0	0	24,000	5,468	29,468
52	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
53	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
54	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
55	PEORIA	2	0	0	0	0	24,000	5,468	29,468
56	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
57	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
58	PEORIA	1	0	0	0	0	24,000	5,468	29,468
59	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
60	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
61	PEORIA	0	2	0	0	0	24,000	47,220	71,220
62	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
63	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
64	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
65	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
66	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
67	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
68	PHOENIX	11	0	0	0	0	24,000	24,204	48,204
69	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
70	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
71	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
72	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
73	PEORIA	2	0	0	0	0	24,000	5,468	29,468
74	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
75	PEORIA	1	0	0	0	0	24,000	5,468	29,468
76	SCOTTSDALE	6	0	0	0	0	24,000	16,136	40,136
77	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
78	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
79	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
80	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
81	PEORIA	1	0	0	0	0	24,000	5,468	29,468
82	PHOENIX	2	0	0	0	0	24,000	5,468	29,468

Phoenix Fiber Study
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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
83	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
84	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
85	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
86	PHOENIX	10	0	0	0	0	24,000	24,204	48,204
87	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
88	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
89	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
90	SCOTTSDALE	16	0	0	0	0	24,000	23,192	47,192
91	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
92	PHOENIX	6	0	0	0	0	24,000	16,136	40,136
93	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
94	PEORIA	1	0	0	0	0	24,000	5,468	29,468
95	PEORIA	1	0	0	0	0	24,000	5,468	29,468
96	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
97	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
98	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
99	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
100	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
101	PHOENIX	5	5	0	0	0	24,000	67,988	91,988
102	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
103	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
104	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
105	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
106	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
107	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
108	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
109	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
110	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
111	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
112	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
113	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
114	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
115	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
116	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
117	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
118	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
119	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
120	SCOTTSDALE	0	1	0	0	0	24,000	44,520	68,520
121	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
122	SCOTTSDALE	3	1	0	0	0	24,000	45,258	69,258
123	SCOTTSDALE	0	1	0	0	0	24,000	44,520	68,520

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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
124	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
125	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
126	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
127	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
128	PHOENIX	23	3	0	0	0	24,000	74,522	98,522
129	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
130	PHOENIX	7	0	0	0	0	24,000	16,136	40,136
131	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
132	PHOENIX	19	0	0	0	0	24,000	23,897	47,897
133	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
134	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
135	PHOENIX	6	0	0	0	0	24,000	16,136	40,136
136	PARADISE VALLEY	8	0	0	0	0	24,000	16,136	40,136
137	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
138	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
139	SCOTTSDA	1	0	0	0	0	24,000	5,468	29,468
140	SCOTTSDALE	16	0	0	0	0	24,000	23,192	47,192
141	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
142	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
143	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
144	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
145	PHOENIX	20	2	0	0	0	24,000	50,910	74,910
146	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
147	PHOENIX	9	0	0	0	0	24,000	24,204	48,204
148	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
149	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
150	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
151	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
152	SCOTTSDALE	4	0	0	0	0	24,000	8,068	32,068
153	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
154	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
155	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
156	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
157	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
158	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
159	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
160	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
161	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
162	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
163	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
164	GLENDALE	1	0	0	0	0	24,000	5,468	29,468

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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
165	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
166	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
167	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
168	GLENDALE	4	0	0	0	0	24,000	8,068	32,068
169	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
170	PARADISE VALLEY	1	0	0	0	0	24,000	5,468	29,468
171	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
172	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
173	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
174	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
175	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
176	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
177	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
178	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
179	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
180	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
181	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
182	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
183	PHOENIX	9	0	0	0	0	24,000	24,204	48,204
184	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
185	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
186	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
187	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
188	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
189	PHOENIZ	1	0	0	0	0	24,000	5,468	29,468
190	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
191	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
192	PHOENIX	7	0	0	0	0	24,000	16,136	40,136
193	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
194	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
195	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
196	GLENDALE	1	0	0	0	0	24,000	5,468	29,468
197	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
198	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
199	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
200	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
201	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
202	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
203	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
204	PHOENIX	10	0	0	0	0	24,000	24,204	48,204
205	PHOENIX	4	0	0	0	0	24,000	8,068	32,068

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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
206	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
207	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
208	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
209	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
210	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
211	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
212	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
213	PHOENIX	9	0	0	0	0	24,000	24,204	48,204
214	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
215	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
216	SCOTTSDALE	19	1	0	0	0	24,000	48,210	72,210
217	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
218	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
219	SCOTTSDALE	5	0	0	0	0	24,000	16,136	40,136
220	SCOTTSDALE	4	0	0	0	0	24,000	8,068	32,068
221	PHOENIX	7	0	0	0	0	24,000	16,136	40,136
222	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
223	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
224	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
225	SCOTTSDAL	1	0	0	0	0	24,000	5,468	29,468
226	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
227	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
228	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
229	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
230	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
231	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
232	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
233	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
234	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
235	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
236	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
237	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
238	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
239	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
240	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
241	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
242	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
243	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
244	PHOENIX	1	1	0	0	0	24,000	45,258	69,258
245	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
246	PHOENIX	2	0	0	0	0	24,000	5,468	29,468

Phoenix Fiber Study
Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communications

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
247	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
248	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
249	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
250	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
251	PHOENIX	12	0	0	0	0	24,000	24,204	48,204
252	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
253	PHOENIX	12	0	0	0	0	24,000	24,204	48,204
254	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
255	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
256	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
257	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
258	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
259	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
260	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
261	SCOTTSDALE	11	0	0	0	0	24,000	24,204	48,204
262	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
263	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
264	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
265	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
266	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
267	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
268	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
269	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
270	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
271	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
272	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
273	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
274	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
275	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
276	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
277	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
278	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
279	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
280	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
281	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
282	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
283	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
284	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
285	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
286	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
287	PHOENIX	2	0	0	0	0	24,000	5,468	29,468

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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
288	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
289	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
290	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
291	MESA	1	0	0	0	0	24,000	5,468	29,468
292	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
293	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
294	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
295	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
296	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
297	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
298	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
299	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
300	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
301	PHOENIX	8	0	0	0	0	24,000	16,136	40,136
302	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
303	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
304	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
305	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
306	SCOTTSDALE	8	0	0	0	0	24,000	16,136	40,136
307	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
308	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
309	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
310	MESA	2	0	0	0	0	24,000	5,468	29,468
311	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
312	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
313	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
314	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
315	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
316	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
317	SCOTTSDALE	3	0	0	0	0	24,000	5,468	29,468
318	TOLLESON	1	0	0	0	0	24,000	5,468	29,468
319	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
320	CHANDLER	2	0	0	0	0	24,000	5,468	29,468
321	SCOTTSDALE	2	0	0	0	0	24,000	5,468	29,468
322	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
323	TOLLESON	6	0	0	0	0	24,000	16,136	40,136
324	TOLLESON	27	1	0	0	0	24,000	49,686	73,686
325	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
326	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
327	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
328	PHOENIX	1	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
329	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
330	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
331	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
332	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
333	MESA	2	0	0	0	0	24,000	5,468	29,468
334	MESA	1	0	0	0	0	24,000	5,468	29,468
335	MESA	5	0	0	0	0	24,000	16,136	40,136
336	SCOTTSDALE	1	0	0	0	0	24,000	5,468	29,468
337	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
338	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
339	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
340	TOLLESON	2	0	0	0	0	24,000	5,468	29,468
341	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
342	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
343	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
344	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
345	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
346		0	0	1	0	0	24,000	41,820	65,820
347	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
348	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
349	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
350	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
351	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
352	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
353	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
354	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
355	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
356	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
357	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
358	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
359	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
360	PHOENIX	10	0	0	0	0	24,000	24,204	48,204
361	PHOENIX	12	0	0	0	0	24,000	24,204	48,204
362	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
363	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
364	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
365	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
366	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
367	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
368	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
369	PHOENIX	1	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
370	PHOENIX	14	0	0	0	0	24,000	23,192	47,192
371	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
372	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
373	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
374	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
375	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
376	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
377	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
378	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
379	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
380	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
381	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
382	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
383	TEMPE	1	0	0	0	0	24,000	5,468	29,468
384	PHOENIX	0	0	0	2	0	24,000	104,624	128,624
385	PHOENIX	50	2	0	0	0	24,000	76,988	100,988
386	AVONDALE	1	0	0	0	0	24,000	5,468	29,468
387	AVONDALE	1	0	0	0	0	24,000	5,468	29,468
388	PHOENIX	4	0	0	0	0	24,000	8,068	32,068
389	TEMPE	1	0	0	0	0	24,000	5,468	29,468
390	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
391	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
392	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
393	TEMPE	2	0	0	0	0	24,000	5,468	29,468
394	TEMPE	1	0	0	0	0	24,000	5,468	29,468
395	TEMPE	2	0	0	0	0	24,000	5,468	29,468
396	TEMPE	1	0	0	0	0	24,000	5,468	29,468
397	TEMPE	3	0	0	0	0	24,000	5,468	29,468
398	TEMPE	1	0	0	0	0	24,000	5,468	29,468
399	TEMPE	2	0	0	0	0	24,000	5,468	29,468
400	CHANDLER	6	0	0	0	0	24,000	16,136	40,136
401	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
402	PHOENIX	19	1	0	0	0	24,000	48,210	72,210
403	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
404	TEMPE	1	0	0	0	0	24,000	5,468	29,468
405	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
406	TEMPE	1	0	0	0	0	24,000	5,468	29,468
407	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
408	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
409	CHANDLER	3	0	0	0	0	24,000	5,468	29,468
410	CHANDLER	2	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
411	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
412	PHOENIX	7	0	0	0	0	24,000	16,136	40,136
413	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
414	TEMPE	1	0	0	0	0	24,000	5,468	29,468
415	TEMPE	1	0	0	0	0	24,000	5,468	29,468
416	GILBERT	1	0	0	0	0	24,000	5,468	29,468
417	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
418	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
419	TEMPE	2	0	0	0	0	24,000	5,468	29,468
420	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
421	TEMPE	1	0	0	0	0	24,000	5,468	29,468
422	PHOENIX	5	0	0	0	0	24,000	16,136	40,136
423	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
424	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
425	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
426	TEMPE	13	0	0	0	0	24,000	23,192	47,192
427	TEMPE	35	0	0	0	0	24,000	47,089	71,089
428	MESA	1	0	0	0	0	24,000	5,468	29,468
429	TEMPE	6	0	0	0	0	24,000	16,136	40,136
430	TEMPE	35	0	0	0	0	24,000	47,089	71,089
431	TEMPE	1	0	0	0	0	24,000	5,468	29,468
432	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
433	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
434	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
435	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
436	MESA	3	0	0	0	0	24,000	5,468	29,468
437	MESA	1	0	0	0	0	24,000	5,468	29,468
438	MESA	1	0	0	0	0	24,000	5,468	29,468
439	TEMPE	2	0	0	0	0	24,000	5,468	29,468
440	TEMPE	2	0	0	0	0	24,000	5,468	29,468
441	MESA	1	0	0	0	0	24,000	5,468	29,468
442	MESA	4	0	0	0	0	24,000	8,068	32,068
443	MESA	1	0	0	0	0	24,000	5,468	29,468
444	TEMPE	61	0	0	0	0	24,000	53,628	77,628
445	TEMPE	24	0	0	0	0	24,000	24,602	48,602
446	TEMPE	0	0	1	0	0	24,000	41,820	65,820
447	TEMPE	2	0	0	0	0	24,000	5,468	29,468
448	TEMPE	3	0	0	0	0	24,000	5,468	29,468
449	TEMPE	1	0	0	0	0	24,000	5,468	29,468
450	MESA	2	0	0	0	0	24,000	5,468	29,468
451	TEMPE	1	0	0	0	0	24,000	5,468	29,468

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DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
452	TEMPE	1	0	0	0	0	24,000	5,468	29,468
453	TEMPE	4	0	0	0	0	24,000	8,068	32,068
454	TEMPE	1	0	0	0	0	24,000	5,468	29,468
455	TEMPE	2	0	0	0	0	24,000	5,468	29,468
456	TEMPE	7	0	0	0	0	24,000	16,136	40,136
457	TEMPE	1	0	0	0	0	24,000	5,468	29,468
458	TEMPE	2	0	0	0	0	24,000	5,468	29,468
459	TEMPE	1	0	0	0	0	24,000	5,468	29,468
460	TEMPE	9	0	0	0	0	24,000	24,204	48,204
461	PHOENIX	5	3	0	0	0	24,000	66,056	90,056
462	PHOENIX	13	1	0	0	0	24,000	47,472	71,472
463	PHOENIX	0	1	0	0	0	24,000	44,520	68,520
464	TEMPE	1	0	0	0	0	24,000	5,468	29,468
465	TEMPE	1	0	0	0	0	24,000	5,468	29,468
466	MESA	1	0	0	0	0	24,000	5,468	29,468
467	TEMPE	3	0	0	0	0	24,000	5,468	29,468
468	TEMPE	1	0	0	0	0	24,000	5,468	29,468
469	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
470	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
471	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
472	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
473	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
474	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
475	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
476	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
477	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
478	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
479	TEMPE	1	0	0	0	0	24,000	5,468	29,468
480	TEMPE	1	0	0	0	0	24,000	5,468	29,468
481	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
482	TEMPE	1	0	0	0	0	24,000	5,468	29,468
483	TEMPE	1	0	0	0	0	24,000	5,468	29,468
484	TEMPE	1	0	0	0	0	24,000	5,468	29,468
485	TEMPE	2	0	0	0	0	24,000	5,468	29,468
486	MESA	1	0	0	0	0	24,000	5,468	29,468
487	PHOENIX	18	1	0	0	0	24,000	48,210	72,210
488	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
489	MESA	2	0	0	0	0	24,000	5,468	29,468
490	MESA	7	0	0	0	0	24,000	16,136	40,136
491	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
492	MESA	2	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
493	TEMPE	2	0	0	0	0	24,000	5,468	29,468
494	PHOENIX	6	0	0	0	0	24,000	16,136	40,136
495	PHOENIX	1	1	0	0	0	24,000	45,258	69,258
496	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
497	MESA	3	0	0	0	0	24,000	5,468	29,468
498	MESA	1	0	0	0	0	24,000	5,468	29,468
499	TEMPE	1	0	0	0	0	24,000	5,468	29,468
500	TEMPE	1	0	0	0	0	24,000	5,468	29,468
501	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
502	MEZA	1	0	0	0	0	24,000	5,468	29,468
503	MESA	2	0	0	0	0	24,000	5,468	29,468
504	MESA	3	0	0	0	0	24,000	5,468	29,468
505	MESA	1	0	0	0	0	24,000	5,468	29,468
506	MESA	1	0	0	0	0	24,000	5,468	29,468
507	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
508	MESA	1	0	0	0	0	24,000	5,468	29,468
509	MESA	1	0	0	0	0	24,000	5,468	29,468
510	MESA	1	0	0	0	0	24,000	5,468	29,468
511	MESA	2	0	0	0	0	24,000	5,468	29,468
512	MESA	3	0	0	0	0	24,000	5,468	29,468
513	MESA	1	0	0	0	0	24,000	5,468	29,468
514	MESA	2	0	0	0	0	24,000	5,468	29,468
515	TEMPE	2	0	0	0	0	24,000	5,468	29,468
516	MESA	1	0	0	0	0	24,000	5,468	29,468
517	MESA	2	0	0	0	0	24,000	5,468	29,468
518	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
519	PHOENIX	10	0	0	0	0	24,000	24,204	48,204
520		0	0	1	0	0	24,000	41,820	65,820
521	MESA	2	0	0	0	0	24,000	5,468	29,468
522	GILBERT	1	0	0	0	0	24,000	5,468	29,468
523	GILBERT	2	0	0	0	0	24,000	5,468	29,468
524	GILBERT	4	0	0	0	0	24,000	8,068	32,068
525	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
526	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
527	MESA	1	0	0	0	0	24,000	5,468	29,468
528	MESA	1	0	0	0	0	24,000	5,468	29,468
529	PHOENIX	3	0	0	0	0	24,000	5,468	29,468
530	PHOENIX	18	0	0	0	0	24,000	23,897	47,897
531	TEMPE	1	0	0	0	0	24,000	5,468	29,468
532	MESA	3	0	0	0	0	24,000	5,468	29,468
533	TEMPE	1	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
534	MESA	1	0	0	0	0	24,000	5,468	29,468
535	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
536	GILBERT	2	0	0	0	0	24,000	5,468	29,468
537	GILBERT	1	0	0	0	0	24,000	5,468	29,468
538	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
539	CHANDLER	4	0	0	0	0	24,000	8,068	32,068
540	GILBERT	5	1	0	0	0	24,000	45,996	69,996
541	TEMPE	2	0	0	0	0	24,000	5,468	29,468
542	TEMPE	3	0	0	0	0	24,000	5,468	29,468
543	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
544	TEMPE	1	0	0	0	0	24,000	5,468	29,468
545	TEMPE	1	0	0	0	0	24,000	5,468	29,468
546	TEMPE	2	0	0	0	0	24,000	5,468	29,468
547	TEMPE	2	0	0	0	0	24,000	5,468	29,468
548	TEMPE	8	0	0	0	0	24,000	16,136	40,136
549	TEMPE	5	0	0	0	0	24,000	16,136	40,136
550	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
551	TEMPE	5	0	0	0	0	24,000	16,136	40,136
552	CHANDLER	2	0	0	0	0	24,000	5,468	29,468
553	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
554	PHOENIX	1	0	0	0	0	24,000	5,468	29,468
555	TEMPE	7	0	0	0	0	24,000	16,136	40,136
556	GILBERT	3	0	0	0	0	24,000	5,468	29,468
557	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
558	PHOENIX	2	0	0	0	0	24,000	5,468	29,468
559	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
560	TEMPE	1	0	0	0	0	24,000	5,468	29,468
561	CHANDLER	11	1	0	0	0	24,000	46,734	70,734
562	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
563	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
564	CHANDLER	8	0	0	0	0	24,000	16,136	40,136
565	CHANDLER	12	2	0	0	0	24,000	49,434	73,434
566	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
567	CHANDLER	2	0	0	0	0	24,000	5,468	29,468
568	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
569	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
570	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
571	CHANDLER	10	0	0	0	0	24,000	24,204	48,204
572	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
573	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
574	CHANDLER	1	0	0	0	0	24,000	5,468	29,468

DISTANCE BAND 2: 1,001 TO 2,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
575	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
576	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
577	CHANDLER	1	0	0	0	0	24,000	5,468	29,468
578	PICACHO	5	0	0	0	0	24,000	16,136	40,136
				Sub-Totals			$13,872,000	$5,323,750	
	# in this Study	3101						Sum of Total Cost	$19,195,750
	# in this Band	578						Average of Total Cost	$33,211
								% of Addresses in this Band	18.64%

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
2	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
3	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
4	PHOENIX	7	0	0	0	0	44,500	16,136	60,636
5	PHOENIX	10	0	0	0	0	44,500	24,204	68,704
6	PHOENIX	6	1	0	0	0	44,500	45,996	90,496
7	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
8	PHOENIX	0	8	0	0	0	44,500	66,512	111,012
9	PHOENIX	0	0	0	3	0	44,500	156,936	201,436
10	PHOENIX	33	8	0	0	0	44,500	93,460	137,960
11	PHOENIX	0	1	0	0	0	44,500	44,520	89,020
12	PHOENIX	12	0	0	0	0	44,500	24,204	68,704
13	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
14	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
15	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
16	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
17	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
18	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
19	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
20	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
21	SCOTTSDALE	6	0	0	0	0	44,500	16,136	60,636
22	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
23	PHOENIX	7	0	0	0	0	44,500	16,136	60,636
24	GLENDALE	1	1	0	0	0	44,500	45,258	89,758
25	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
26	PEORIA	1	0	0	0	0	44,500	5,468	49,968
27	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
28	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
29	PHOENIX	6	0	0	0	0	44,500	16,136	60,636
30	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
31	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
32	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
33	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
34	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
35	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
36	GLENDALE	2	0	0	0	0	44,500	5,468	49,968
37	PHOENIX	6	0	0	0	0	44,500	16,136	60,636
38	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
39	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
40	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
41	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
42	PHOENIX	8	0	0	0	0	44,500	16,136	60,636

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
43	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
44	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
45	SCOTTSDA	1	0	0	0	0	44,500	5,468	49,968
46	SCOTTSDA	2	0	0	0	0	44,500	5,468	49,968
47	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
48	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
49	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
50	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
51	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
52	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
53	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
54	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
55	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
56	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
57	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
58	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
59	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
60	PHOENIX	8	1	0	0	0	44,500	45,996	90,496
61	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
62	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
63	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
64	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
65	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
66	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
67	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
68	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
69	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
70	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
71	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
72	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
73	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
74	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
75	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
76	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
77	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
78	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
79	GLENDALE	12	0	0	0	0	44,500	24,204	68,704
80	GLENDALE	3	0	0	0	0	44,500	5,468	49,968
81	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
82	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
83	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
84	YOUNGTOWN	0	1	0	0	0	44,500	44,520	89,020

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
85	SUN CITY	2	0	0	0	0	44,500	5,468	49,968
86	PEORIA	1	0	0	0	0	44,500	5,468	49,968
87	SURPRISE	3	0	0	0	0	44,500	5,468	49,968
88	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
89	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
90	PEORIA	1	0	0	0	0	44,500	5,468	49,968
91	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
92	GLENDALE	3	0	0	0	0	44,500	5,468	49,968
93	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
94	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
95	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
96	GLENDALE	39	2	0	0	0	44,500	74,873	119,373
97	PEORIA	1	0	0	0	0	44,500	5,468	49,968
98	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
99	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
100	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
101	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
102	PHOENIX	3	1	0	0	0	44,500	45,258	89,758
103	SCOTTSDALE	5	0	0	0	0	44,500	16,136	60,636
104	PHOENIX	17	0	0	0	0	44,500	23,897	68,397
105	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
106	PHOENIX	8	2	0	0	0	44,500	48,696	93,196
107	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
108	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
109	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
110	SCOTTSDALE	7	1	0	0	0	44,500	45,996	90,496
111	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
112	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
113	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
114	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
115	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
116	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
117	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
118	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
119	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
120	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
121	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
122	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
123	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
124	GLENDALE	2	0	0	0	0	44,500	5,468	49,968
125	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
126	PHOENIX	2	0	0	0	0	44,500	5,468	49,968

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
127	PEORIA	1	0	0	0	0	44,500	5,468	49,968
128	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
129	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
130	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
131	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
132	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
133	SCOTTSDALE	3	0	0	0	0	44,500	5,468	49,968
134	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
135	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
136	SCOTTSDALE	6	0	0	0	0	44,500	16,136	60,636
137	SCOTTSDALE	6	0	0	0	0	44,500	16,136	60,636
138	SCOTTSDALE	5	0	0	0	0	44,500	16,136	60,636
139	SCOTTSDA	0	1	0	0	0	44,500	44,520	89,020
140	SCOTTSDA	5	0	0	0	0	44,500	16,136	60,636
141	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
142	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
143	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
144	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
145	PEORIA	1	0	0	0	0	44,500	5,468	49,968
146	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
147	PEORIA	1	0	0	0	0	44,500	5,468	49,968
148	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
149	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
150	PEORIA	1	0	0	0	0	44,500	5,468	49,968
151	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
152	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
153	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
154	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
155	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
156	SCOTTSDALE	14	0	0	0	0	44,500	23,192	67,692
157	PHOENIX	6	0	0	0	0	44,500	16,136	60,636
158	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
159	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
160	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
161	SCOTTSDALE	10	0	0	0	0	44,500	24,204	68,704
162	SCOTTSDA	1	0	0	0	0	44,500	5,468	49,968
163	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
164	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
165	PARADISE VALLEY	1	0	0	0	0	44,500	5,468	49,968
166	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
167	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
168	PHOENIX	0	2	0	0	0	44,500	47,220	91,720

DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
169	SCOTTSDALE	3	0	0	0	0	44,500	5,468	49,968
170	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
171	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
172	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
173	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
174	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
175	PHOENIX	20	2	0	0	0	44,500	50,910	95,410
176	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
177	GLENDALE	1	0	0	0	0	44,500	5,468	49,968
178	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
179	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
180	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
181	PHOENIX	10	0	0	0	0	44,500	24,204	68,704
182	PHOENIX	1	2	0	0	0	44,500	47,958	92,458
183	SCOTTSDALE	3	0	0	0	0	44,500	5,468	49,968
184	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
185	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
186	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
187	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
188	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
189	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
190	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
191	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
192	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
193	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
194	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
195	PHOENIX	9	1	0	0	0	44,500	46,734	91,234
196	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
197	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
198	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
199	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
200	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
201	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
202	PHOENIX	21	0	0	0	0	44,500	24,602	69,102
203	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
204	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
205	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
206	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
207	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
208	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
209	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
210	PHOENIX	2	0	0	0	0	44,500	5,468	49,968

Phoenix Fiber Study
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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
211	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
212	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
213	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
214	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
215	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
216	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
217	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
218	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
219	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
220	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
221	PHOENIX	16	0	0	0	0	44,500	23,192	67,692
222	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
223	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
224	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
225	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
226	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
227	SCOTTSDALE	7	0	0	0	0	44,500	16,136	60,636
228	SCOTTSDALE	6	0	0	0	0	44,500	16,136	60,636
229	SCOTTSDALE	5	0	0	0	0	44,500	16,136	60,636
230	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
231	SCOTTSDALE	5	0	0	0	0	44,500	16,136	60,636
232	SCOTTSDALE	9	0	0	0	0	44,500	24,204	68,704
233	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
234	PHOENIX	9	0	0	0	0	44,500	24,204	68,704
235	PHOENIX	14	0	0	0	0	44,500	23,192	67,692
236	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
237	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
238	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
239	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
240	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
241	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
242	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
243	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
244	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
245	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
246	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
247	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
248	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
249	SCOTTSDALE	10	0	0	0	0	44,500	24,204	68,704
250	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
251	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
252	SCOTTSDALE	10	0	0	0	0	44,500	24,204	68,704

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
253	SCOTTSDALE	7	0	0	0	0	44,500	16,136	60,636
254	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
255	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
256	SCOTTSDALE	2	0	0	0	0	44,500	5,468	49,968
257	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
258	SCOTTSDALE	21	0	0	0	0	44,500	24,602	69,102
259	PHOENIX	1	1	0	0	0	44,500	45,258	89,758
260	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
261	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
262	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
263	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
264	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
265	MESA	1	0	0	0	0	44,500	5,468	49,968
266	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
267	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
268	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
269	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
270	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
271	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
272	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
273	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
274	PHOENIX	27	0	0	0	0	44,500	25,307	69,807
275	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
276	PHOENIX	16	1	0	0	0	44,500	47,472	91,972
277	PHOENIX	15	2	0	0	0	44,500	50,172	94,672
278	PHOENIX	19	0	0	0	0	44,500	23,897	68,397
279	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
280	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
281	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
282	SCOTTSDALE	5	0	0	0	0	44,500	16,136	60,636
283	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
284	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
285	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
286	PHOENIX	13	1	0	0	0	44,500	47,472	91,972
287	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
288	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
289	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
290	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
291	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
292	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
293	MESA	1	0	0	0	0	44,500	5,468	49,968
294	PHOENIX	1	0	0	0	0	44,500	5,468	49,968

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
295	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
296	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
297	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
298	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
299	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
300	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
301	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
302	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
303	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
304	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
305	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
306	PHOENIX	9	0	0	0	0	44,500	24,204	68,704
307	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
308	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
309	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
310	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
311	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
312	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
313	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
314	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
315	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
316	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
317	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
318	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
319	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
320	PHOENIX	10	0	0	0	0	44,500	24,204	68,704
321	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
322	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
323	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
324	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
325	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
326	MESA	4	0	0	0	0	44,500	8,068	52,568
327	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
328	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
329	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
330	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
331	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
332	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
333	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
334	SCOTTSDALE	4	0	0	0	0	44,500	8,068	52,568
335	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
336	PHOENIX	1	0	0	0	0	44,500	5,468	49,968

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
337	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
338	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
339	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
340	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
341	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
342	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
343	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
344	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
345	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
346	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
347	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
348	MESA	1	0	0	0	0	44,500	5,468	49,968
349	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
350	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
351	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
352	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
353	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
354	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
355	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
356	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
357	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
358	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
359	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
360	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
361	SCOTTSDALE	1	0	0	0	0	44,500	5,468	49,968
362	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
363	TOLLESON	1	0	0	0	0	44,500	5,468	49,968
364	MESA	2	0	0	0	0	44,500	5,468	49,968
365	MESA	1	0	0	0	0	44,500	5,468	49,968
366	MESA	1	0	0	0	0	44,500	5,468	49,968
367	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
368	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
369	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
370	PHOENIX	40	0	0	0	0	44,500	47,794	92,294
371	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
372	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
373	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
374	TEMPE	1	0	0	0	0	44,500	5,468	49,968
375	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
376	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
377	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
378	PHOENIX	3	0	0	0	0	44,500	5,468	49,968

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
379	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
380	2	2	0	0	0	0	44,500	5,468	49,968
381	TOLLESON	1	0	0	0	0	44,500	5,468	49,968
382	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
383	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
384	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
385	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
386	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
387	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
388	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
389	TEMPE	1	0	0	0	0	44,500	5,468	49,968
390	TEMPE	1	0	0	0	0	44,500	5,468	49,968
391	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
392	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
393	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
394	PHOENIX	12	0	0	0	0	44,500	24,204	68,704
395	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
396	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
397	TOLLESON	3	0	0	0	0	44,500	5,468	49,968
398	PHOENIX	16	0	0	0	0	44,500	23,192	67,692
399	PHOENIX	5	0	0	0	0	44,500	16,136	60,636
400	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
401	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
402	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
403	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
404	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
405	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
406	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
407	PHOENIX	10	0	0	0	0	44,500	24,204	68,704
408	AVONDALE	1	0	0	0	0	44,500	5,468	49,968
409	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
410	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
411	GILBERT	1	0	0	0	0	44,500	5,468	49,968
412	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
413	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
414	MESA	2	0	0	0	0	44,500	5,468	49,968
415	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
416	TEMPE	5	0	0	0	0	44,500	16,136	60,636
417	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
418	GILBERT	1	0	0	0	0	44,500	5,468	49,968
419	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
420	GILBERT	1	0	0	0	0	44,500	5,468	49,968

Phoenix Fiber Study
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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
421	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
422	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
423	MESA	1	0	0	0	0	44,500	5,468	49,968
424	MESA	1	0	0	0	0	44,500	5,468	49,968
425	TEMPE	2	0	0	0	0	44,500	5,468	49,968
426	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
427	CHANDLER	2	0	0	0	0	44,500	5,468	49,968
428	TEMPE	1	0	0	0	0	44,500	5,468	49,968
429	TEMPE	3	0	0	0	0	44,500	5,468	49,968
430	TEMPE	1	0	0	0	0	44,500	5,468	49,968
431	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
432	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
433	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
434	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
435	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
436	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
437	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
438	FLORENCE	1	0	0	0	0	44,500	5,468	49,968
439	MESA	1	0	0	0	0	44,500	5,468	49,968
440	MESA	1	0	0	0	0	44,500	5,468	49,968
441	MESA	9	0	0	0	0	44,500	24,204	68,704
442	MESA	1	0	0	0	0	44,500	5,468	49,968
443	GILBERT	1	0	0	0	0	44,500	5,468	49,968
444	MESA	1	0	0	0	0	44,500	5,468	49,968
445	MESA	3	0	0	0	0	44,500	5,468	49,968
446	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
447	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
448	MESA	11	0	0	0	0	44,500	24,204	68,704
449	MESA	2	0	0	0	0	44,500	5,468	49,968
450	MESA	3	0	0	0	0	44,500	5,468	49,968
451	GILBERT	1	0	0	0	0	44,500	5,468	49,968
452	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
453	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
454	MESA	2	0	0	0	0	44,500	5,468	49,968
455	MESA	1	0	0	0	0	44,500	5,468	49,968
456	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
457	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
458	GILBERT	1	0	0	0	0	44,500	5,468	49,968
459	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
460	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
461	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
462	MESA	1	0	0	0	0	44,500	5,468	49,968

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
463	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
464	MESA	1	0	0	0	0	44,500	5,468	49,968
465	MESA	2	0	0	0	0	44,500	5,468	49,968
466	MESA	1	0	0	0	0	44,500	5,468	49,968
467	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
468	MESA	2	0	0	0	0	44,500	5,468	49,968
469	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
470	TEMPE	1	0	0	0	0	44,500	5,468	49,968
471	TEMPE	1	0	0	0	0	44,500	5,468	49,968
472	TEMPE	1	0	0	0	0	44,500	5,468	49,968
473	TEMPE	1	0	0	0	0	44,500	5,468	49,968
474	TEMPE	17	0	0	0	0	44,500	23,897	68,397
475	TEMPE	4	0	0	0	0	44,500	8,068	52,568
476	PHOENIX	4	0	0	0	0	44,500	8,068	52,568
477	MESA	1	0	0	0	0	44,500	5,468	49,968
478	MESA	1	0	0	0	0	44,500	5,468	49,968
479	MESA	1	0	0	0	0	44,500	5,468	49,968
480	MESA	1	0	0	0	0	44,500	5,468	49,968
481	MESA	2	0	0	0	0	44,500	5,468	49,968
482	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
483	MESA	2	0	0	0	0	44,500	5,468	49,968
484	TEMPE	1	0	0	0	0	44,500	5,468	49,968
485	TEMPE	1	0	0	0	0	44,500	5,468	49,968
486	MESA	3	0	0	0	0	44,500	5,468	49,968
487	MESA	6	0	0	0	0	44,500	16,136	60,636
488	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
489	MESA	1	0	0	0	0	44,500	5,468	49,968
490	MESA	2	0	0	0	0	44,500	5,468	49,968
491	TEMPE	2	0	0	0	0	44,500	5,468	49,968
492	MESA	4	0	0	0	0	44,500	8,068	52,568
493	TEMPE	1	0	0	0	0	44,500	5,468	49,968
494	MESA	1	0	0	0	0	44,500	5,468	49,968
495	TEMPE	4	0	0	0	0	44,500	8,068	52,568
496	TEMPE	1	0	0	0	0	44,500	5,468	49,968
497	TEMPE	2	0	0	0	0	44,500	5,468	49,968
498	TEMPE	2	0	0	0	0	44,500	5,468	49,968
499	MESA	1	0	0	0	0	44,500	5,468	49,968
500	TEMPE	1	0	0	0	0	44,500	5,468	49,968
501	APACHE JUNCTION	3	0	0	0	0	44,500	5,468	49,968
502	TEMPE	1	0	0	0	0	44,500	5,468	49,968
503	GILBERT	4	0	0	0	0	44,500	8,068	52,568
504	TEMPE	17	0	0	0	0	44,500	23,897	68,397

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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
505	TEMPE	8	0	0	0	0	44,500	16,136	60,636
506	TEMPE	1	0	0	0	0	44,500	5,468	49,968
507	GILBERT	3	0	0	0	0	44,500	5,468	49,968
508	GILBERT	1	0	0	0	0	44,500	5,468	49,968
509	GILBERT	1	2	0	0	0	44,500	47,958	92,458
510	GILBERT	0	1	0	0	0	44,500	44,520	89,020
511	GILBERT	246	25	0	0	0	44,500	283,387	327,887
512	GILBERT	21	3	0	0	0	44,500	74,522	119,022
513	GILBERT	0	11	0	0	0	44,500	73,612	118,112
514	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
515	GILBERT	1	0	0	0	0	44,500	5,468	49,968
516	GILBERT	1	0	0	0	0	44,500	5,468	49,968
517	MESA	1	0	0	0	0	44,500	5,468	49,968
518	TEMPE	4	0	0	0	0	44,500	8,068	52,568
519	GILBERT	1	0	0	0	0	44,500	5,468	49,968
520	MESA	3	0	0	0	0	44,500	5,468	49,968
521	GILBERT	1	0	0	0	0	44,500	5,468	49,968
522	GILBERT	1	0	0	0	0	44,500	5,468	49,968
523	CHANDLER	4	0	0	0	0	44,500	8,068	52,568
524	TEMPE	3	0	0	0	0	44,500	5,468	49,968
525	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
526	TEMPE	1	0	0	0	0	44,500	5,468	49,968
527	TEMPE	2	0	0	0	0	44,500	5,468	49,968
528	TEMPE	2	0	0	0	0	44,500	5,468	49,968
529	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
530	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
531	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
532	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
533	PHOENIX	2	0	0	0	0	44,500	5,468	49,968
534	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
535	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
536	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
537	PHOENIX	1	0	0	0	0	44,500	5,468	49,968
538	PHOENIX	3	0	0	0	0	44,500	5,468	49,968
539	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
540	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
541	CHANDLER	3	0	0	0	0	44,500	5,468	49,968
542	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
543	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
544	CHANDLER	3	0	0	0	0	44,500	5,468	49,968
545	CHANDLER	11	2	0	0	0	44,500	49,434	93,934
546	CHANDLER	1	0	0	0	0	44,500	5,468	49,968

Phoenix Fiber Study
Cost Model - Competitive Access Providers
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DISTANCE BAND 3: 2,001 TO 4,000 FT FROM NEAREST CAP FIBER ROUTE									
KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
547	CHANDLER	9	3	0	0	0	44,500	74,124	118,624
548	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
549	CHANDLER	11	0	0	0	0	44,500	24,204	68,704
550	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
551	CHANDLER	2	0	0	0	0	44,500	5,468	49,968
552	CHANDLER	2	0	0	0	0	44,500	5,468	49,968
553	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
554	CHANDLER	3	0	0	0	0	44,500	5,468	49,968
555	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
556	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
557	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
558	CHANDLER	1	0	0	0	0	44,500	5,468	49,968
559	CHANDLER	3	0	0	0	0	44,500	5,468	49,968
560	SACATON	1	0	0	0	0	44,500	5,468	49,968
561	ELOY	2	0	0	0	0	44,500	5,468	49,968
				Sub-Totals			**$24,964,500**	**$5,703,867**	
	# in this Study	**3101**						**Sum of Total Cost**	**$30,668,367**
	# in this Band	**561**						**Average of Total Cost**	**$54,667**
								% of Addresses in this Band	**18.09%**

Phoenix Fiber Study
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DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
1	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
2	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
3	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
4	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
5	PHOENIX	8	0	0	0	0	63,000	16,136	79,136
6	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
7	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
8	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
9	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
10	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
11	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
12	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
13	PHOENIX	8	1	0	0	0	63,000	45,996	108,996
14	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
15	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
16	PHOENIX	7	0	0	0	0	63,000	16,136	79,136
17	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
18	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
19	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
20	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
21	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
22	CAVE CREEK	1	0	0	0	0	63,000	5,468	68,468
23	PEORIA	1	0	0	0	0	63,000	5,468	68,468
24	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
25	PEORIA	1	0	0	0	0	63,000	5,468	68,468
26	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
27	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
28	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
29	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
30	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
31	PEORIA	1	0	0	0	0	63,000	5,468	68,468
32	GLENDALE	3	0	0	0	0	63,000	5,468	68,468
33	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
34	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
35	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
36	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
37	PEORIA	3	0	0	0	0	63,000	5,468	68,468
38	SCOTTSDA	1	0	0	0	0	63,000	5,468	68,468
39	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
40	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
41	SCOTTSDA	1	0	0	0	0	63,000	5,468	68,468

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DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
42	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
43	SCOTTSDA	1	0	0	0	0	63,000	5,468	68,468
44	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
45	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
46	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
47	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
48	PHOENIX	6	0	0	0	0	63,000	16,136	79,136
49	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
50	SCOTTSDALE	8	0	0	0	0	63,000	16,136	79,136
51	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
52	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
53	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
54	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
55	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
56	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
57	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
58	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
59	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
60	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
61	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
62	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
63	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
64	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
65	PHOENIX	39	0	0	0	0	63,000	47,794	110,794
66	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
67	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
68	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
69	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
70	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
71	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
72	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
73	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
74	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
75	SCOTTSDALE	4	0	0	0	0	63,000	8,068	71,068
76	PEORIA	1	0	0	0	0	63,000	5,468	68,468
77	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
78	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
79	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
80	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
81	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
82	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468

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DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
83	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
84	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
85	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
86	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
87	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
88	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
89	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
90	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
91	PHEONIX	7	0	0	0	0	63,000	16,136	79,136
92	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
93	SCOTTSDALE	6	0	0	0	0	63,000	16,136	79,136
94	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
95	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
96	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
97	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
98	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
99	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
100	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
101	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
102	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
103	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
104	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
105	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
106	PHOENIX	10	0	0	0	0	63,000	24,204	87,204
107	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
108	PEORIA	1	0	0	0	0	63,000	5,468	68,468
109	PEORIA	1	0	0	0	0	63,000	5,468	68,468
110	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
111	SUN CITY	1	0	0	0	0	63,000	5,468	68,468
112	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
113	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
114	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
115	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
116	SUN CITY	1	0	0	0	0	63,000	5,468	68,468
117	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
118	PHOENIX	38	2	0	0	0	63,000	74,873	137,873
119	SUN CITY	2	0	0	0	0	63,000	5,468	68,468
120	SUN CITY	2	0	0	0	0	63,000	5,468	68,468
121	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
122	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
123	PHOENIX	2	0	0	0	0	63,000	5,468	68,468

Phoenix Fiber Study
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DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
124	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
125	SCOTTSDALE	4	0	0	0	0	63,000	8,068	71,068
126	SCOTTSDALE	2	0	0	0	0	63,000	5,468	68,468
127	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
128	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
129	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
130	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
131	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
132	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
133	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
134	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
135	SCOTTSDALE	4	0	0	0	0	63,000	8,068	71,068
136	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
137	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
138	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
139	SCOTTSDALE	0	1	0	0	0	63,000	44,520	107,520
140	SCOTTSDALE	1	4	0	0	0	63,000	60,150	123,150
141	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
142	PHOENIX	14	0	0	0	0	63,000	23,192	86,192
143	PHOENIX	11	0	0	0	0	63,000	24,204	87,204
144	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
145	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
146	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
147	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
148	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
149	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
150	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
151	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
152	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
153	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
154	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
155	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
156	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
157	SCOTTSDA	3	0	0	0	0	63,000	5,468	68,468
158	PEORIA	3	0	0	0	0	63,000	5,468	68,468
159	PARADISE LLEY	1	0	0	0	0	63,000	5,468	68,468
160	PARADISE VALLEY	2	0	0	0	0	63,000	5,468	68,468
161	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
162	PEORIA	1	0	0	0	0	63,000	5,468	68,468
163	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
164	GLENDALE	1	0	0	0	0	63,000	5,468	68,468

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DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
165	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
166	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
167	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
168	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
169	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
170	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
171	PARADISE VALL	1	0	0	0	0	63,000	5,468	68,468
172	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
173	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
174	GLENDALE	9	1	0	0	0	63,000	46,734	109,734
175	SCOTTSDALE	6	0	0	0	0	63,000	16,136	79,136
176	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
177	GLENDALE	6	0	0	0	0	63,000	16,136	79,136
178	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
179	GLENDALE	4	0	0	0	0	63,000	8,068	71,068
180	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
181	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
182	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
183	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
184	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
185	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
186	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
187	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
188	QUEEN CREEK	1	0	0	0	0	63,000	5,468	68,468
189	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
190	GLENDALE	3	0	0	0	0	63,000	5,468	68,468
191	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
192	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
193	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
194	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
195	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
196	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
197	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
198	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
199	PHOENIX	5	0	0	0	0	63,000	16,136	79,136
200	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
201	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
202	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
203	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
204	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
205	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
206	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
207	SCOTTSDALE	10	0	0	0	0	63,000	24,204	87,204
208	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
209	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
210	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
211	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
212	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
213	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
214	GLENDALE	2	0	0	0	0	63,000	5,468	68,468
215	PHOENIX	5	0	0	0	0	63,000	16,136	79,136
216	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
217	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
218	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
219	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
220	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
221	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
222	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
223	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
224	PHOENIX	10	0	0	0	0	63,000	24,204	87,204
225	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
226	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
227	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
228	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
229	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
230	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
231	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
232	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
233	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
234	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
235	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
236	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
237	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
238	SCOTTSDALE	3	0	0	0	0	63,000	5,468	68,468
239	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
240	SCOTTSDALE	5	0	0	0	0	63,000	16,136	79,136
241	MESA	1	0	0	0	0	63,000	5,468	68,468
242	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
243	AVONDALE	1	0	0	0	0	63,000	5,468	68,468
244	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
245	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
246	PHOENIX	1	0	0	0	0	63,000	5,468	68,468

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
247	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
248	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
249	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
250	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
251	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
252	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
253	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
254	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
255	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
256	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
257	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
258	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
259	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
260	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
261	MESA	1	0	0	0	0	63,000	5,468	68,468
262	MESA	1	0	0	0	0	63,000	5,468	68,468
263	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
264	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
265	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
266	MESA	2	0	0	0	0	63,000	5,468	68,468
267	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
268	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
269	MESA	1	0	0	0	0	63,000	5,468	68,468
270	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
271	MESA	1	0	0	0	0	63,000	5,468	68,468
272	TEMPE	3	0	0	0	0	63,000	5,468	68,468
273	MESA	3	0	0	0	0	63,000	5,468	68,468
274	MESA	1	0	0	0	0	63,000	5,468	68,468
275	SCOTTSDALE	1	0	0	0	0	63,000	5,468	68,468
276	TOLLESON	1	0	0	0	0	63,000	5,468	68,468
277	TOLLESON	1	0	0	0	0	63,000	5,468	68,468
278	MESA	2	0	0	0	0	63,000	5,468	68,468
279	MESA	3	0	0	0	0	63,000	5,468	68,468
280	GILBERT	1	0	0	0	0	63,000	5,468	68,468
281	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
282	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
283	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
284	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
285	TOLLESON	3	0	0	0	0	63,000	5,468	68,468
286	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
287	MESA	1	0	0	0	0	63,000	5,468	68,468

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
288	MESA	1	0	0	0	0	63,000	5,468	68,468
289	TOLLESON	1	0	0	0	0	63,000	5,468	68,468
290	PHOENIX	8	0	0	0	0	63,000	16,136	79,136
291	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
292	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
293	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
294	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
295	PHOENIX	5	0	0	0	0	63,000	16,136	79,136
296	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
297	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
298	MESA	1	0	0	0	0	63,000	5,468	68,468
299	MESA	1	0	0	0	0	63,000	5,468	68,468
300	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
301	HIGLEY	1	0	0	0	0	63,000	5,468	68,468
302	MESA	2	0	0	0	0	63,000	5,468	68,468
303	MESA	7	1	0	0	0	63,000	45,996	108,996
304	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
305	MESA	3	0	0	0	0	63,000	5,468	68,468
306	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
307	MESA	1	0	0	0	0	63,000	5,468	68,468
308	CHANDLER	3	0	0	0	0	63,000	5,468	68,468
309	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
310	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
311	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
312	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
313	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
314	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
315	MESA	1	0	0	0	0	63,000	5,468	68,468
316	MESA	1	0	0	0	0	63,000	5,468	68,468
317	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
318	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
319	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
320	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
321	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
322	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
323	PHOENIX	3	0	0	0	0	63,000	5,468	68,468
324	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
325	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
326	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
327	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
328	PHOENIX	1	0	0	0	0	63,000	5,468	68,468

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
329	PHOENIX	5	0	0	0	0	63,000	16,136	79,136
330	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
331	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
332	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
333	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
334	PHOENIX	0	0	1	0	0	63,000	41,820	104,820
335	PHOENIX	171	19	0	0	0	63,000	213,345	276,345
336	PHOENIX	22	0	0	0	0	63,000	24,602	87,602
337	PHOENIX	0	0	0	0	1	63,000	62,021	125,021
338	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
339	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
340	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
341	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
342	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
343	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
344	MESA	1	0	0	0	0	63,000	5,468	68,468
345	TEMPE	2	0	0	0	0	63,000	5,468	68,468
346	TEMPE	1	0	0	0	0	63,000	5,468	68,468
347	TEMPE	1	0	0	0	0	63,000	5,468	68,468
348	TEMPE	2	0	0	0	0	63,000	5,468	68,468
349	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
350	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
351	TEMPE	3	0	0	0	0	63,000	5,468	68,468
352	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
353	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
354	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
355	MESA	2	0	0	0	0	63,000	5,468	68,468
356	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
357	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
358	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
359	MESA	1	0	0	0	0	63,000	5,468	68,468
360	MESA	1	0	0	0	0	63,000	5,468	68,468
361	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
362	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
363	MESA	1	0	0	0	0	63,000	5,468	68,468
364	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
365	GLENDALE	1	0	0	0	0	63,000	5,468	68,468
366	MESA	2	0	0	0	0	63,000	5,468	68,468
367	TOLLESON	1	0	0	0	0	63,000	5,468	68,468
368	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
369	GILBERT	5	0	0	0	0	63,000	16,136	79,136

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
370	MESA	1	0	0	0	0	63,000	5,468	68,468
371	MESA	1	0	0	0	0	63,000	5,468	68,468
372	MESA	1	0	0	0	0	63,000	5,468	68,468
373	MESA	1	0	0	0	0	63,000	5,468	68,468
374	PHOENIX	4	0	0	0	0	63,000	8,068	71,068
375	MESA	4	0	0	0	0	63,000	8,068	71,068
376	MESA	2	0	0	0	0	63,000	5,468	68,468
377	TEMPE	1	0	0	0	0	63,000	5,468	68,468
378	MESA	1	0	0	0	0	63,000	5,468	68,468
379		1	0	0	0	0	63,000	5,468	68,468
380	MESA	2	0	0	0	0	63,000	5,468	68,468
381		1	0	0	0	0	63,000	5,468	68,468
382	MESA	4	0	0	0	0	63,000	8,068	71,068
383		1	0	0	0	0	63,000	5,468	68,468
384	MESA	1	0	0	0	0	63,000	5,468	68,468
385	MESA	1	0	0	0	0	63,000	5,468	68,468
386	MESA	1	0	0	0	0	63,000	5,468	68,468
387	MESA	3	0	0	0	0	63,000	5,468	68,468
388	TEMPE	3	0	0	0	0	63,000	5,468	68,468
389	GILBERT	4	0	0	0	0	63,000	8,068	71,068
390	PHOENIX	2	0	0	0	0	63,000	5,468	68,468
391	TEMPE	8	0	0	0	0	63,000	16,136	79,136
392	GILBERT	2	0	0	0	0	63,000	5,468	68,468
393	TEMPE	2	0	0	0	0	63,000	5,468	68,468
394	TEMPE	5	2	0	0	0	63,000	48,696	111,696
395	GILBERT	1	0	0	0	0	63,000	5,468	68,468
396	GILBERT	1	0	0	0	0	63,000	5,468	68,468
397	TEMPE	2	0	0	0	0	63,000	5,468	68,468
398	GILBERT	1	0	0	0	0	63,000	5,468	68,468
399	TEMPE	7	0	0	0	0	63,000	16,136	79,136
400	TEMPE	3	0	0	0	0	63,000	5,468	68,468
401	GILBERT	1	0	0	0	0	63,000	5,468	68,468
402	GILBERT	1	0	0	0	0	63,000	5,468	68,468
403	GILBERT	3	0	0	0	0	63,000	5,468	68,468
404	GILBERT	1	0	0	0	0	63,000	5,468	68,468
405	TEMPE	3	0	0	0	0	63,000	5,468	68,468
406	TEMPE	4	0	0	0	0	63,000	8,068	71,068
407	TEMPE	1	0	0	0	0	63,000	5,468	68,468
408	TEMPE	2	0	0	0	0	63,000	5,468	68,468
409	GILBERT	4	0	0	0	0	63,000	8,068	71,068
410	GILBERT	1	2	0	0	0	63,000	47,958	110,958

Phoenix Fiber Study
Cost Model - Competitive Access Providers
Developed by POWER Engineers, Inc. for US WEST Communications

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
411	MESA	1	0	0	0	0	63,000	5,468	68,468
412	MESA	4	0	0	0	0	63,000	8,068	71,068
413	MESA	1	0	0	0	0	63,000	5,468	68,468
414	MESA	4	0	0	0	0	63,000	8,068	71,068
415	GILBERT	4	0	0	0	0	63,000	8,068	71,068
416	PHOENIX	9	0	0	0	0	63,000	24,204	87,204
417	TEMPE	1	0	0	0	0	63,000	5,468	68,468
418	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
419	TEMPE	1	0	0	0	0	63,000	5,468	68,468
420	TEMPE	1	0	0	0	0	63,000	5,468	68,468
421	GILBERT	3	0	0	0	0	63,000	5,468	68,468
422	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
423	CHANDLER	25	1	0	0	0	63,000	49,686	112,686
424	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
425	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
426	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
427	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
428	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
429	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
430	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
431	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
432	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
433	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
434	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
435	PHOENIX	1	0	0	0	0	63,000	5,468	68,468
436	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
437	CHANDLER	21	1	0	0	0	63,000	48,948	111,948
438	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
439	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
440	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
441	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
442	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
443	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
444	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
445	CHANDLER	3	0	0	0	0	63,000	5,468	68,468
446	CHANDLER	24	1	0	0	0	63,000	48,948	111,948
447	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
448	CHANDLER	3	0	0	0	0	63,000	5,468	68,468
449	CHANDLER	3	0	0	0	0	63,000	5,468	68,468
450	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
451	CHANDLER	1	0	0	0	0	63,000	5,468	68,468

DISTANCE BAND 4: 4,001 TO 9,000 FT FROM NEAREST CAP FIBER ROUTE

KEY	CITY	DS1	DS3	OC-3	OC-12	OC-48	PATH COST	EQPT COST	TOTAL COST
452	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
453	CHANDLER	2	0	0	0	0	63,000	5,468	68,468
454	CHANDLER	1	0	0	0	0	63,000	5,468	68,468
				Sub-Totals			$28,602,000	$3,689,231	
	# in this Study	3101					Sum of Total Cost		$32,291,231
	# in this Band	454					Average of Total Cost		$71,126
							% of Addresses in this Band		14.64%

9

PROFILE

POWER ENGINEERS, INC.

PROFILE

POWER ENGINEERS, INC.

POWER Engineers, Inc. (POWER) is a consulting engineering firm headquartered in Idaho with offices located throughout the United States and overseas. Since its beginning 20 years ago, POWER has grown from a staff of three to a firm which now employs over 400. Through growth and diversification, POWER has become a multidisciplinary consulting firm specializing in many technical areas. POWER's full-service capabilities provide integrated services from preliminary planning stages through construction and close-out. Its professional staff includes engineers in the following disciplines:

- Project Management
- **Communications**
- GIS / GPS
- Mechanical
- Electrical
- Geotechnical
- Controls
- Combustion
- SCADA
- Structural / Architectural
- Civil
- Chemical
- Petroleum
- Mining
- Environmental
- Thermography
- **Training Development / Delivery**

Staff and/or field office locations include:

- Phoenix, AZ
- Denver, CO
- Atlanta, GA
- Boise, ID
- Hailey, ID
- St. Louis, MO
- Mindanao, The Philippines
- Portland, OR
- Austin, TX

POWER has been recognized as one of the top ten engineering consulting firms in the country by trade publications, i.e., "*Consulting - Specifying Engineer*", etc.

45-260 (06/01/98)les

POWER Engineers, Inc.

ICS DIVISION

LINES OF BUSINESS

- TELEPHONY
  - Traditional Outside Plant Planning & Design (Copper, Fiber, SLE, etc.)
  - Data Base Administration
  - Records Management
- BROADBAND PLANNING & DESIGN
  - Video & Data Transport Systems
  - Energy Management Systems (Distribution & Substation)
- RF / CELLULAR / PCS
  - Design
  - Site Acquisition
- SYSTEMS DESIGN
  - Inside Plant Design & Engineering
  - LAN/WAN Networks
  - SONET
- GIS / GPS SERVICES
  - Conversion
  - Analysis
  - Application Development
- TRAINING DEVELOPMENT & DELIVERY
  - Instructional Design (Job Studies, Needs Assessment, etc.)
  - Interactive Multimedia
  - Computer Based Training (CBT)
  - Electronic Support Systems
  - OSP Engineering Training (Instructors)
  - Construction / I & M Training (Instructors)
- ETC.

POWER Engineers, Inc.

ICS DIVISION

REPRESENTATIVE CLIENT LIST

- AT & T
- CENTRAL & SOUTH WEST UTILITIES
- CITIZENS TELEPHONE (& UTILITY)
- COX COMMUNICATIONS
- CUSTER TELEPHONE (INDEPENDENT)
- FIBERLINK
- JONES LIGHTWAVE
- LUCENT TECHNOLOGIES
- MCI
- MICRON
- R & L ELECTRONICS
- TCI
- U S GOVERNMENT (GEOLOGICAL SURVEY)
- U S SPRINT COMMUNICATIONS CO.
- U S WEST COMMUNICATIONS

IX.

QUALIFICATIONS OF POWER ENGINEERS, INC.

POWER Engineers, Inc. is a company qualified to complete engineering, and related, work in the communications environment. The communications engineering division is also supported with expertise in all the professional engineering disciplines and a complete, state of the art GIS operation.

The following pages describe POWER in terms of a brief profile, communications lines of business, and a representative client list.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF KAREN A. STEWART
STATE OF OREGON	)	
COUNTY OF MULTNOMAH	)	
	) :)	SS

Karen A. Stewart, of lawful age being first duly sworn, deposes and states:

1. My name is Karen A. Stewart. I am Director, Markets-Regulatory Strategy of U S WEST Communications in Portland, Oregon.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

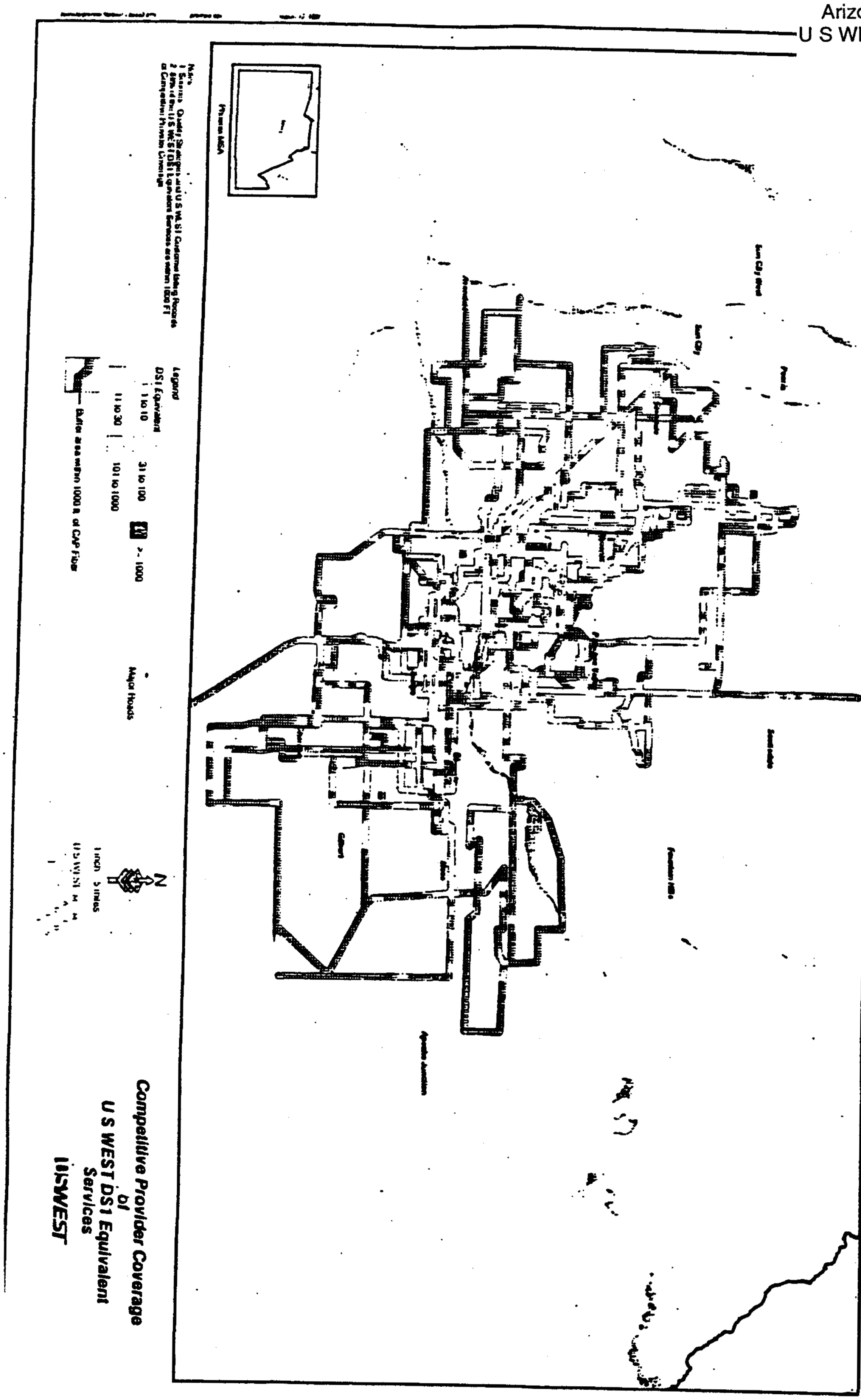
OFFICIAL SEAL
JANICE KAY KERR
NOTARY PUBLIC-OREGON
COMMISSION NO. 046143
MY COMMISSION EXPIRES SEPT. 17, 1999

Karen A. Stewart
Karen A. Stewart

SUBSCRIBED AND SWORN to before me this 4th day of January 1999.

Janice Kay Kerr
Notary Public

My Commission Expires:
Sept. 17, 1999


Competitive Provider Coverage
of
U S WEST DS1 Equivalent
Services
USWEST
Phoenix MSA
Legend
DS1 Equivalent
1 to 10
11 to 30
31 to 100
101 to 1000
> 1000
Buffer area within 1000 ft of CAP Fiber
Major Roads
Sun City West
Sun City
Peoria
Scottsdale
Fountain Hills
Gilbert
Apache Junction
N

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on this 24th day of August, 1998, I have caused a copy of the foregoing **PETITION OF U S WEST COMMUNICATIONS, INC. FOR FORBEARANCE** to be served, via hand delivery, upon the persons listed on the attached service list.

Kelseau Powe, Jr.

William E. Kennard
Federal Communications Commission
Room 814
1919 M Street, N.W.
Washington, DC 20554

Gloria Tristani
Federal Communications Commission
Room 826
1919 M Street, N.W.
Washington, DC 20554

Michael K. Powell
Federal Communications Commission
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Harold Furchtgott-Roth
Federal Communications Commission
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Susan P. Ness
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Jane E. Jackson
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Kathryn C. Brown
Federal Communications Commission
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Kathryn Schroeder
Federal Communications Commission
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International Transcription
Services, Inc.
1231 20th Street, N.W.
Washington, DC 20036

(Section10.doc)
Last Update:8/24/98

AT&T TCG

AT&T Completes TCG merger;
TCG Now Core of AT&T Local Services Network Unit.
Read More.

Enhanced Data Services

Products and Services

TCG's extensive portfolio of fully managed Data services are designed to address a wide variety of networking needs. Not only can TCG furnish solutions for your data networking needs today, but TCG can also provide you a graceful migration path to new broadband networking solutions for the future. After assessing the total cost of ownership, TCG's data solutions offer more scalable and fault-tolerant solutions at a lower aggregate cost than compared to building your own dedicated data network.

These competitively priced services are provided over highly reliable, state-of-the-art ATM and fiber optic networks.

TCG's complete set of Data Services include:

- OmniLAN^{sm} - Transparent LAN Services
- OmniStream^{sm} ATM - Native ATM Services
- OmniStream^{sm} Frame Relay - Enhanced Frame Relay Services

AT&T TCG

AT&T Completes TCG merger;
TCG Now Core of AT&T Local Services Network Unit.
Read More.

Private Line Services

Products and Services

Looking for someone who can provide you with a private line service that not only fits your needs but gives you the features, reliability and support you want?

Let TCG bring your plans to reality with our host of private line services. Click on any item below to learn more:

- OmniRing(sm) SONET Services
  If you're looking for a network that has enhanced survivability, advanced architectures and centralized monitoring capabilities, this one is for you.
- OmniRing(sm) DS0
  For basic 2-wire, 4-wire and DDS private line applications, including FX lines, Tie Trunks, Ringdown and "Hoot & Holler" circuits.
- OmniRing(sm) DS1
  A midrange service for companies with high volumes to multiple sites, an Interexchange Carrier or to another high-volume location.
- OmniRing(sm) DS3
  A high-capacity service for users with high-traffic volumes between locations, including Interexchange Carriers and large businesses.

WHATS NEW
ABOUT TCG
INVESTOR RELATIONS
MEDIA
REGULATORY ISSUES
PRODUCTS & SERVICES
The TCG Difference
TCG Product Line
Private Line Services
Switched Services
Enhanced Data Services
Wireless Services
What Makes Us Special
AREAS WE SERVE
CONTACT US
CAREER OPPORTUNITIES
HOME

AT&T Completes TCG merger;
TCG Now Core of AT&T Local Services Network Unit.
Read More.

Switched Services

Products and Services

At TCG, we offer a series of switched services that are backed by our guaranteed, reliable and disaster-resistant SONET fiber optic backbone network.

Together with 24 hour performance monitoring, fully redundant architecture and a 4 way uniterrupted power supply backup for all critical switching components, TCG offers you the services that you need with the reliability that you deserve!

Select one of the following switched services to learn more:

- PrimeReach(sm) Service
  Affordable, reliable regional services without having to give up your existing local area services.
- PrimeXpress(sm) Service
  A premiere switched line of business digital trunking service providing PBX users with access to TCG's switching center and switch-resident calling services.
- IXC Gateway Service(sm)
  Provides Interexchange Carriers an alternative to switched offerings provided by the incumbent Local Exchange Companies.
- PrimePath(sm) Service
  A reliable local calling service with access to your choice of long distance carriers.
- PrimePlex(sm) Services
  Flexible ISDN services that give you productivity enhancing power to meet the demands of today and the challenges of tomorrow.
- PrimeNBX(sm)
  A shared PBX service that is a flexible

telecommunications solution for your business.

- PrimeCard(sm)
  Calling card solutions
- PrimeOne(sm) & PrimePlus(sm)
  Local & Toll Usage Plans
- TCG USA(sm)
  TCG's United Savings Advantage qualifies you for volume discounts based on your services with us in two or more cities!
- PrimeDistance(sm) Service
  Providing the highest quality service for all domestic and international long-distance calls - all at competitive rates.
- CERFtone(sm) Service
  An integrated Voice and Internet solution for Business, from America's Premier Local Telecommunications Provider.

AT&T Completes TCG merger;
TCG Now Core of AT&T Local Services Network Unit.
Read More.

Go The "Last Mile" with TCG!

In today's competitive business marketplace, the timely and reliable transmission of information is imperative. Many companies cannot afford the repercussions of network downtime caused by cable cuts and wire/central office outages. Still other businesses are expanding so rapidly that new lines of communication must be set up or old ones reconfigured in a matter of days. How do we at TCG address these issues?

OmniWave® services are TCG's wireless answer to addressing the high speed digital broadband needs of our customers for the "last mile" access to their buildings. We call them "OmniWave® Services" as they are in the high frequency micro*wave*, or to get really specific, milliwave, radio frequency range.

TCG OmniWave® Services is the brand name given to our broadband, fixed point-to-point wireless services. They are comparable in application and in service level to TCG's fiber-based services.

OmniWave® Services can be used to provide private line, switched, Internet and data services (LAN extensions) over TCG's 38 GHz licensed spectrum. They are the wireless version of DS1s and DS3s. Three radios are currently available: 4 DS1, 8 DS1, and 1 DS3.

This access can apply when existing fiber does not reach the destination building or as a diversity supplement when needed to support existing fiber. Now customers of all types, carriers, corporations, small businesses, MDUs, the list goes on, can get directly onto TCG's network, by-passing the LEC, in a way that is often cheaper and faster than installing traditional fiber.

What Are the Advantages of Using OmniWave®?

WHATS NEW
ABOUT TCG
INVESTOR RELATIONS
MEDIA
REGULATORY ISSUES
PRODUCTS & SERVICES
The TCG Difference
TCG Product Line
Private Line Services
Switched Services
Enhanced Data Services
Wireless Services
What Makes Us Special
AREAS WE SERVE
CONTACT US
CAREER OPPORTUNITIES
HOME

YES - Wireless Works!

View Fact Sheet on OmniWave® Network (HTML)
Download the Fact Sheet on OmniWave® Network (Adobe Acrobat)

View Fact Sheet on OmniWave® Point-to-Point (HTML)
Download the Fact Sheet on OmniWave® Point-to-Point (Adobe Acrobat)

Ab

HISTORY | REGULATORY UPDATE | NEWSLETTERS | COMMUNITY SERVICE | EMPLOYMENT

ELECTRIC LIGHTWAVE

SEARCH

ELI Home
About ELI
Products & Services
Media & Investor Relations
Why ELI?
Technical Support
Contact Us

Company Description

Founded in 1990, Electric Lightwave Inc. (NASDAQ: ELIX) is an integrated communications provider offering data, Internet access, and broadband transport services to businesses nationwide. In the western United States, the company is a full-service provider offering local and long distance telephone service, videoconferencing, and prepaid services to business customers.

Rated as the "nation's third best overall value" for Internet backbones by Boardwatch Magazine, Electric Lightwave builds and operates all-digital, high-speed fiber-optic networks for businesses and long-distance carriers across the United States. In 1998, the company completed an ATM (Asynchronous Transfer Mode) network upgrade that delivers ultra high-speed transmission and increases bandwidth efficiency over its network. Electric Lightwave is currently building additional SONET-based long-haul routes and ringed Metropolitan Area Networks (MANs) in the Western United States. This will enable Electric Lightwave to offer its full suite of services over one broadband network. When completed, Electric Lightwave's Western SONET-ring network of more than 4,500 miles will deliver unmatched speed, reliability, and advanced capabilities to customers — all at extremely competitive prices.

Corporate Customer Profile

Electric Lightwave offers services to medium-to-large "communications-intensive" organizations, often with multiple locations, representing a broad range of industries: financial services, health care, education, legal services, technology, web-centric, and other organizations dependent on the reliable transfer of and access to information.

Wholesale Customer Profile

Electric Lightwave offers services to national and local interexchange carriers as well as wireless providers who value the company's diversity, flexibility, security, efficiency, and network management capabilities.

Products and Services

In the western United States, Electric Lightwave offers a full-suite of integrated communications services including: local phone service, switched and dedicated long distance, private networks, advanced data services and Internet access, videoconferencing, and prepaid calling cards. In its full-service markets, Electric Lightwave bundles its services to provide the convenience of one single bill and one number to call for service.

Electric Lightwave is expanding across the country and will initially offer data and Internet access services in its new markets. Currently, Electric Lightwave plans to launch these services in a dozen major markets across the country including Chicago, Atlanta, New York, and Boston by 1999.

Electric Lightwave currently serves 83 municipalities including major metropolitan areas such as San Francisco and Los Angeles. Currently, the company employs over 840 people and is headquartered in Vancouver, Wash.

Local Telephone
Basic Business Lines
PBX/Key Systems Trunks
Virtual Private Exchange
Centrex™
Foreign Exchange Services
Voice Messaging
Multi-Service Fractional T-1
Customer Premise Equipment
Fax Mail
ISDN PRI
OC-3 / OC-3C
CLASS™ Services
Wholesale LTS

Long Distance
Retail Switched 1+ Services
Retail Dedicated 1+ Services
Wholesale Termination
Conferencing
800 Services - Dedicated
800 Services - Switched
Prepaid Debit Cards
Travel Cards

Data and Video
Dedicated Internet Services
Frame Relay
International Frame Relay
Transparent LAN Service
Switched 56 KB
Dialable Wideband Service
Videoconferencing
ATM
Remote NETCONNECT™

Network Access
56 KB / 64 KB
DS-1DS-3
Disaster Recovery
Multiplexing
Collocation
OC-12
Diverse Routing
OC-3 / OC-3C

Corporate and Regional Offices:

Corporate Office
4400 77th Avenue
Vancouver, WA 98662
(360) 816-3000

Idaho
10452 West Emerald
Boise, ID 83704
(208) 376-2400

Arizona
1620 W. Fountainhead Pkwy
Suite 610
Tempe, AZ 85282
(602) 277-1122

Nevada
3753 Howard Hughes Prkwy
Suite 200
Las Vegas, NV 89109
(702) 836-8415

Los Angeles, California
5230 Pacific Concourse Dr.
Suite 200
Los Angeles, CA 90045
(310) 643-4564

Oregon
400 SW Sixth Avenue
Suite 500
Portland, OR 97204
(503) 972-8330

Sacramento, California
650 J Street
Sacramento, CA 95814
(916) 231-5700

Utah
4 Triad Center
Suite 200
Salt Lake City, UT 84180
(801) 924-3000

San Diego, California
4275 Executive Square
Suite 800
La Jolla, CA 92037
(619) 546-2997

Seattle, Washington
1218 Third Avenue
Suite 915
Seattle, WA 98101
(206) 812-2000

San Francisco, California
1750 Montgomery Street
San Francisco, CA 94111
(415) 773-5370

Spokane, Washington
510 West Riverside Avenue
Suite 101
Spokane, WA 99208
(509) 363-4500

Colorado
2605 S. Monroe
Denver, CO 80210
(303) 756-5665

Tacoma, Washington
1148 Broadway Plaza
Suite 104
Tacoma, WA 98402
(253) 428-4280

Company Contacts:

Media:
Jack Hardy
(360) 816-3602
jack_hardy@eli.net

Investor:
John Unverferth
(360) 816-3217
john_unverferth@eli.net

Products & !

NETWORK MAPS | CUSTOMER CARE

ELECTRIC LIGHTWAVE

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YEAR 2000 STATEMENT

BUNDLED SERVICES

All Calls
Custom Link

DATA SERVICES

ATM NEW
Frame Relay
Internet Connections
ISDN / PRI
NetTrends
Remote NetConnect NEW
Transparent LAN

LOCAL TELEPHONE SERVICE

Basic Lines
Enhanced Business Services
PBX / Key System
Voice Messaging
Virtual Private Exchange

LONG DISTANCE SERVICE

Advantage Calling Card NEW
Conference Calling NEW
Long Distance

PREPAID SERVICES

Prepaid Services NEW

PRIVATE LINE SERVICES

Point - to - Point

VIDEOCONFERENCING

Videoconferencing

Network Maps Customer Care Home

< CUSTOMER CARE

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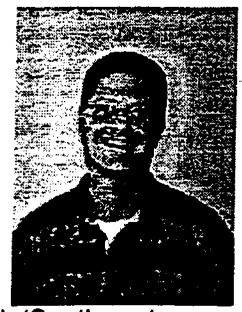
Contact Us

Electric Lightwave, Inc.
Arizona Telecommunications Facts
April 1998

Arizona Sales Office
1620 W. Fountianhead Prwy
Suite 610
Tempe, AZ. 85282
(602) 277-1122

Arizona Branch Manager
Adam Schrage
(602) 277-1122
adam_schrage@eli.net



1993 - Electric Lightwave begins construction of a long haul transport network (Southwest Fibernet) connecting Phoenix and Las Vegas..

1994 - Electric Lightwave completes Southwest Fibernet, a 356 route mile long haul network.

June, 1995 - Competition Rules adopted by Arizona Corporate Commission. Electric Lightwave begins providing limited communications services.

February 8, 1996 - Congress passes the Telecom Act of 1996 allowing local telephone competition for the first time in nearly 100 years.

January 16, 1997 - ELI is granted intrastate authority from the Arizona Corporation Commission to provide intrastate telecommunications services in areas where US West is the incumbent local exchange carrier.

June 18, 1997 - At a ceremony at ELI's switching facility, ELI announced a strategic alliance with Salt River Project (SRP) to connect with SRP's existing 250-mile fiber optic network with ELI's extensive downtown-area network and provide business customers an option of choosing telecommunications services.

Benefits to the Community - The ELI/SRP strategic alliance will benefit the Murphy Elementary School District community with the school district's plans for "Creating Learning Communities On-Line." The program calls for children to learn their way around the Internet, e-mail and on-line tutorial software and use these skills to mentor older family members. Plans include the creation of a learning community environment that will benefit students and adult family members.

Phoenix Full-Service Switch Dedication - (Expected May 1998) Electric Lightwave plans to dedicate a state-of-the-art digital telephone switch, making both local and long distance service available Phoenix area businesses.

Products and Services in Arizona:

Electric Lightwave builds and operates all-digital,

fiber-optic networks over which it offers state-of-the-art voice and data communications services:

- Local telephone service with voice mail and enhanced features
- Long distance service with calling cards
- Advanced data service, including frame relay (domestic and internationally), high-speed -Internet access, ISDN, dialable wideband services and LAN to LAN (local area network) services with very high transport speeds.
- Videoconferencing
- Network access

Electric Lightwave interconnects its major hub cities and market clusters with facilities-based broadband, long-haul fiber-optic networks.

- Long-haul routes currently operational: between Portland and Seattle, Portland and Spokane and Las Vegas and Phoenix
- Long-haul routes under construction: between Portland and Eugene (first half of 1998); Portland to Boise to Salt Lake City to Las Vegas to Los Angeles (first half of 1999)

Electric Lightwave has an extensive Internet backbone that includes 18 frame relay switches and 30 points-of-presence in 26 western cities. NOTE: In a recent national survey by Boardwatch Magazine, ELI ranked third out of 39 companies for "Best Internet Value" (see http://www.boardwatch.com)

Industry Opportunity:
According to the Yankee Group, a Boston-based research firm, in 1997 the competitive local exchange business grew more than 50 percent to $3.1 billion

Company Contacts:

Media:
Jack Hardy
(360) 816-3602
jack_hardy@eli.net

Investors:
John Unverferth
(360) 816-3217
junverfe@eli.net

Arizona General Manager:
Adam Schrage
(602) 277-1122
adam_schrage@eli.net

World Wide Web site:
http://www.eli.net

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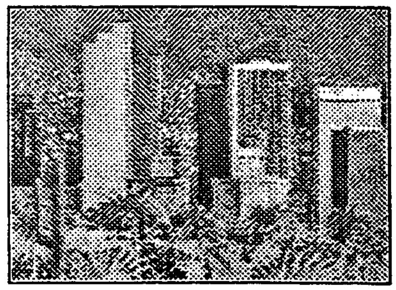
GST IN ARIZONA

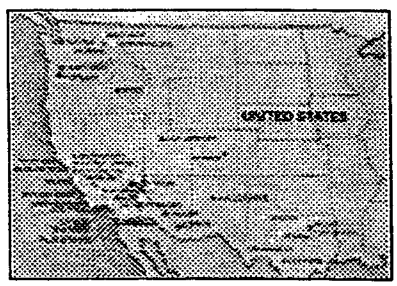
Phoenix:

Location: One Arizona Center
400 E Van Buren, Suite 350
Telephone: (602) 230-7608
Fax: (602) 230-7728



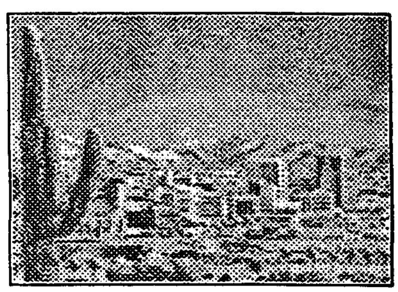
Mesa:

Location:1201, S Alma School Rd., Suite 2000
Mesa, AZ 85210
Telephone: (602) 964-3888
Fax: (602) 898-1946



Tucson:

Sales Office: 4555 S Palo Verde Road, Suite 163
Tucson, AZ 85714
Switch Site: 3836 S. Evans Blvd.
Telephone: (520) 618-4200
Fax: (520) 618-420



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GST

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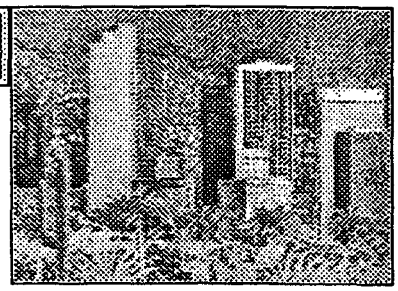
PHOENIX



Location: One Arizona Center
400 E Van Buren, Suite 350
Telephone: (602) 230-7608
Fax: (602) 230-7728

LOCATE OFFICE

Operational Date: February 1994
Investment: Approximately $ 11 Million
General Manager: Bill Bryant
Number of Employees: 18

Services Offered:

Local Dial Tone: Power Trunk, Analog, Business Lines, Centrex, Customer Local Area Signaling Services (CLASS) such as call forwarding, caller ID, voice mail and automatic call back.
Long Distance: IntraLATA and InterLATA, Inbound and Outbound, Long Distance services through dedicated and switched access.
Private Line Dedicated, Long Haul and special access services available for DS1, DS3, OC-3, OC-12, OC-48, IntraLATA, InterLATA
Collocation Services: Customers can physically locate their communications equipment at a GST site.
Carrier Services: Switched services for Carriers.

Internet: High Speed Access, Layered Service
Data Transport Services Frame Relay

GST first introduced service to businesses in the Phoenix area in 1994. Local dial tone service was inaugurated in the Fall of 1997.

Network Information: GST operates a 11-mile fiber optic network (1,290 fiber miles) throughout downtown Phoenix. Conduit and right-of-ways have been acquired for an additional 18 miles of expansion. The network is collocated with two US West central offices. Two switches are installed at the site - one voice switch (Nortel DMS 500) and one data switch (Cascade Frame Relay). GST's operations in Phoenix and Tucson were linked via a 200-mile long haul fiber connection in November of 1997. GST is the first Competitive Local Exchange Carrier (CLEC) to link two existing networks within Arizona. From Phoenix the network is linked to the Company's Los Angeles operation via a

Phoenix, the network is linked to the Company's Los Angeles operation via a long haul connection that passes through Las Vegas.
The Company's total investment in Arizona over the last four years tops $24 million. In March of 1998, GST acquired 100 percent of the outstanding capital stock of Call America Phoenix, solidifying its presence in the Phoenix market.

Regulatory Certifications: GST is authorized by the Federal Communications Commission and the Arizona Corporation Commission to provide resold and facilities-based telecommunications services.

Select a City or a State:

Arizona ▾ Go To

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HOME CONTACT SEARCH

GST

GST

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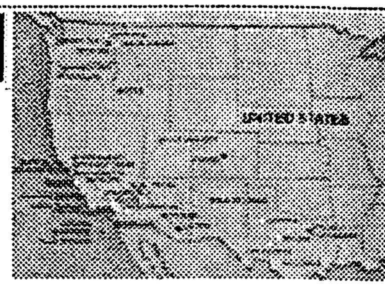
MESA



Location: 1201, S Alma School Rd., Suite 2000
Mesa, AZ 85210
Telephone: (602) 964-3888
Fax: (602) 898-1946

LOCATE OFFICE

Services Offered:

Local Dial Tone: Power Trunk, Analog, Business Lines, Centrex, Customer Local Area Signaling Services (CLASS) such as call forwarding, caller ID, voice mail and automatic call back.

Long Distance: IntraLATA and InterLATA, Inbound and Outbound, Long Distance Services through dedicated or switched access.
Private Line Dedicated, Long Haul and special access services available for DS1, DS3, OC-3, OC-12, IntraLATA, InterLATA
Collocation Services: Customers can physically locate their communications equipment at a GST site.

Internet: High Speed Access, Layered Service
Data Transport Services Frame Relay. DataLinx GlobalLAN Plus - (wide area network) Provides high bandwith connectivity between customer locations with LAN interfaces provided to customers. DataLinx Frame Relay is a public fast packet data service that efficiently handles multiple LAN protocols to support a wide variety of data applications.

Regulatory Certifications: GST is authorized by the Federal Communications Commission and the Arizona Corporation Commission to provide resold and facilities-based telecommunications services.

Select a City or a State:

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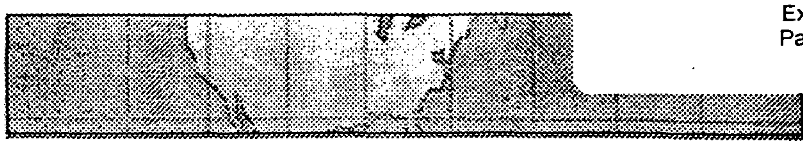
GST



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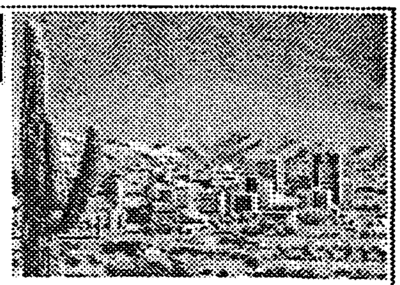
TUCSON



Sales Office:4555 S Palo Verde Road, Suite 163
Tucson, AZ 85714
Switch Site: 3836 S. Evans Blvd.
Telephone: (520) 618-4200
FAX: (520) 618-420

LOCATE OFFICE

Operational Date: August 1995
Investment: $ 13 Million
General Manager: Bill Bryant
Number of Employees: 26

Services Offered:

Local Dial Tone: Power Trunk, Analog, Business Lines, Centrex, Product Bundling, Customer Local Area Signaling Services (CLASS) such as call forwarding, caller ID, voice mail and automatic call back.

Long Distance: IntraLATA and InterLATA, Inbound and Outbound, Long Distance Services through dedicated or switched access.
Private Line Dedicated, Long Haul, IntraLATA, InterLATA, Special Access for DS1, DS3, OC-3, OC-12, OC-48, Collocation at GST Hub.
Collocation Services: Customers can physically locate their communications equipment at a GST site.
Carrier Services: Switched services for Carriers

Internet: High Speed Access, Layered Service
Data Transport Services Frame Relay. DataLinx GlobalLAN Plus - (wide area network) Provides high bandwith connectivity between customer locations with LAN interfaces provided to customers. DataLinx Frame Relay is a public fast packet data service that efficiently handles multiple LAN protocols to support a wide variety of data applications.

GST first introduced service to businesses in the Tucson area in 1995. Local dial tone service was inaugurated in the Fall of 1997.

Network Information: GST operates a 41.6-mile fiber optic network (4,363 fiber miles) which currently serves downtown Tucson and the primary business corridors. The network is collocated with one US West central office. Two switches are installed at the site - one voice switch (Nortel DMS 500) and one data switch (Cascade Frame Relay). An additional 75-mile network will extend

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throughout the Tucson metropolitan area. GST's operations in Tucson and Phoenix were linked via a 200-mile long haul fiber connection in November of 1997. GST is the first Competitive Local Exchange Carrier (CLEC) to link two existing networks within Arizona. From Phoenix, the network is linked to the Company's Los Angeles operation via a long haul connection that passes through Las Vegas.
The Company's total investment in Arizona is approximately $24 million.

Regulatory Certifications: GST is authorized by the Federal Communications Commission and the Arizona Corporation Commission to provide resold and facilities-based telecommunications services.

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- Basic Business Lines
- Centrex Services
- Analog Trunk
- PowerTrunk
- ISDN PRI
- Enhanced Services

LONG DISTANCE SERVICES

- Switched Services 1+
- Dedicated Services 1+
- Card Services

DATA TRANSPORT

- Frame Relay
- ATM

INTERNET SERVICES

- High Speed Access
- Dialup Access

NETWORK SERVICES

- Point-to-point Transport
- Operator Services
- Collocation
- Switched Services for Carriers

INTEGRATED SOLUTIONS

- PowerFlex T1
- Hospitality

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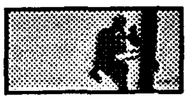
Network Loc



TUCSON

NXX Lookup TUCSON Show NXX

espire's Tucson central business district network backbone, with six miles of state-of-the-art fiber optics, was activated in February, 1996. A network expansion of more than 73 miles was ready for service in May 1996. A third expansion of 29 miles was completed in October 1996. These combine to form the largest fiber optic ring in Tucson, 108 miles

Complete Network Services

- Local technicians available for on-site calls
- Your choice of interexchange carrier access
- Total dedicated access/advanced data solutions
- Fiber optic SONET quality, capacity, and security is unrivaled

Expansion

- 29 mile northwest expansion completed in October 1996; Northwest business corridor along Interstate 10
- 73 mile expansion completed in May 1996; eastward from downtown along Grant and Broadway south to Rita Road complex to serve potential customers like Keane, IBM, and Hughes; through the Airport Authority complex, serving Intuit, UPS, and Butterfield Business Park
- ATM backbone available
- Lucent 5ESS switch installation scheduled for second quarter 1997

Tucson Team.....

- espire's experienced team of professionals can help you develop the right communications solutions for your business

Email Tucson: Tucson Team

Lanny Gray, Branch Sales Manager

Tom Fallon, Senior Account Executive
Clark Phipps, Senior Account Executive
Deena Toal, Account Executive
Laura Chalk, Account Executive
Bruce Mindlin, Account Executive
Robin Kozakevich, Account Executive
Amanda Bayne, Administrative Assistant
Sue Tyriver, Account Consultant
Alma Wodecki, Account Consultant
Charlie Kondrat, Operations Manager
Mark Holbrook, Senior Technician
Mike Davied, Technician

Bob Cartwright, Technician
Owen Sullivan, Site Technician
John Carpenter, Regional Director of Operations
Frankie Holbrook, Regional Administrative Assistant
Scot Vrolyk, Regional Technical Consultant
Nancy Abrams, Regional Account Consultant

Bank of America Plaza
33 N. Stone Avenue, Suite 1200
Tucson, Arizona 85701
Tel: (520) 740-1800
Fax: (520) 740-1818

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MCI WorldCom - Vienna

8521 Leesburg Pike
Vienna, VA 22182
(703) 918-6000 , Fax (703) 918-6601
www.mci.com

☑ Headquarters ☐ Field Operation

- MAJOR OWNERS: MCI WorldCom
- LEGAL FORM: ☐ Public ☐ Private ☑ Subsidiary ☐ JV
- YEAR OPERATIONS BEGAN: 1990
- CEO: Gary M. Parsons
- COO: Nate A. Davis
- SERVICES OFFERED:

☑ Basic Residential	☑ Long Distance
☑ Basic Business	☑ Wireless
☑ Private Line	☑ Internet Access
☑ Complex Data	☑ Calling Card
☐ CATV	☐ Videoconferencing
☑ 800 Service	☐ DSL

- OPERATING UNITS:

MCI WorldCom - Boston
MCI WorldCom - Cincinnati *Planned*
MCI WorldCom - Detroit
MCI WorldCom - Ft. Lauderdale *Planned*
MCI WorldCom - Philadelphia
MCI WorldCom - Pittsburgh
MCI WorldCom - Raleigh *Under Construction*
MCI WorldCom - San Diego
MCI WorldCom - Denver
MCI WorldCom - Minneapolis *Under Construction*
MCI WorldCom - San Francisco
MCI WorldCom - Atlanta
MCI WorldCom - Baltimore
MCI WorldCom - Chicago
MCI WorldCom - Cleveland
MCI WorldCom - Dallas *Planned*
MCI WorldCom - Hartford
MCI WorldCom - Houston *Planned*
MCI WorldCom - Los Angeles
MCI WorldCom - Memphis *Under Construction*
MCI WorldCom - Miami
MCI WorldCom - Milwaukee
MCI WorldCom - New York City

MCI WorldCom - Newark *Under Construction*
MCI WorldCom - Orlando
MCI WorldCom - Phoenix *Under Construction*
MCI WorldCom - Portland
MCI WorldCom - San Antonio *Planned*
MCI WorldCom - Seattle
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MCI WorldCom On-Net Services sm

Product Vision

In today's increasingly complex communications environment, businesses of all types must deal with different companies and networks, disparate products and services, and multiple contacts and contracts. It's not only confusing and often chaotic, but draws critical focus away from key business activities.

Now, imagine this:
A single access method for all of your voice, data and Internet services The industry's most extensive portfolio of integrated products and services volume discounts across local-to-global services One point-of-contact for all of your voice and data services, wherever you do business.

This is the vision of MCI WorldCom^{sm} - a vision that is now a reality with the introduction of MCI WorldCom On-Net Services.

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Access
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Data Services

Internet Access Services
Internet Dial
Private Line
Frame Relay Service
Remote LAN Dial
Managed Services
International Private Line
Managed International Private Line
ATM
ISDN

Integrated Services

Paging
Conferencing
Customer Premises Equipment

Corporate Overview

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Overall Map

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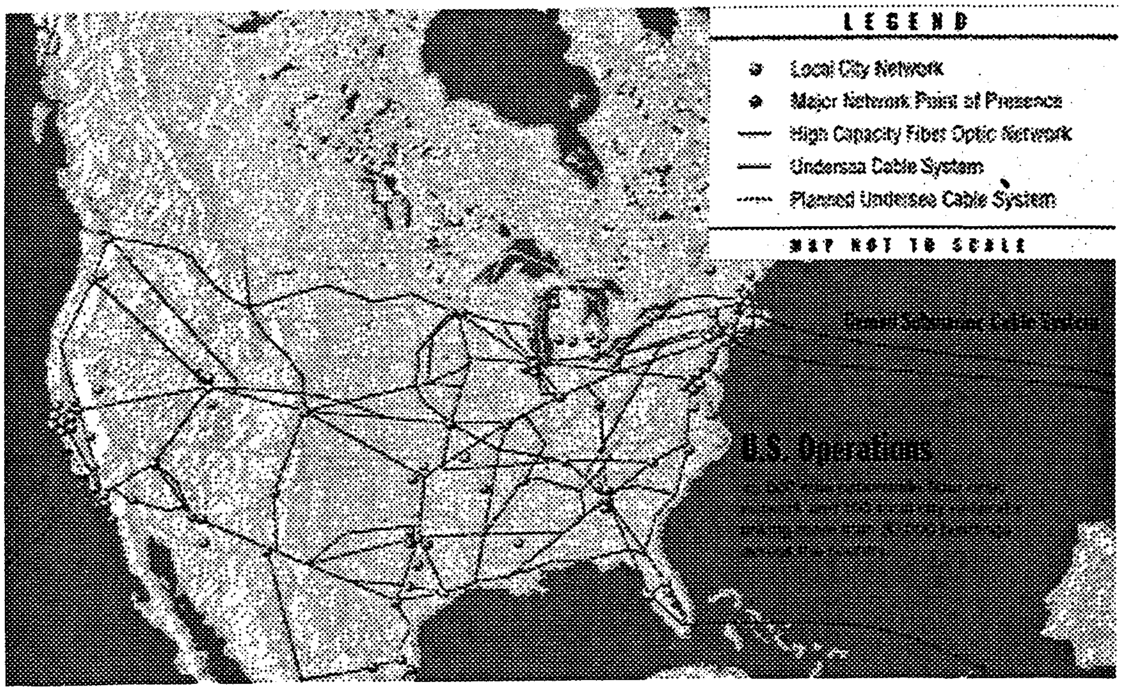


[redacted]
Phoenix, Arizona 85015
[redacted]

TO: Sue Wyatt
Account Manager
US West Communications

FAX #: (602) 630-5317 No. of Pages: 1

FROM: [redacted]
Trust Accountant

DATE: October 28, 1998

It has been a pleasure working with you to improve our phone and data service and find a solution for the problems with our current phone service. With your direction, we have decided that the PRI service would best suit our needs.

As indicated in our meeting, we have been discussing the service with AT&T as well as MCI/Worldcom. Both companies will waive one-time charges if they provide the service.

I am requesting US West to waive their one-time charges, such as installation fees, for the PRI service so we can cost-effectively sign an agreement with you.

We are prepared to sign an agreement as soon as an answer is received to this request.

Thank you again for your assistance in helping us provide our clients the best possible service.

cust needs 2 Pri - T1s + trunks

Mailing Address
[redacted] Phoenix, Arizona 85067-3487

February 27, 1998

[redacted]
Tucson, AZ 85712

Dear [redacted] -

Thank you for the opportunity to introduce WinStar GoodNet as your network solution for [redacted]

As you requested, I included a proposal for WinStar GoodNet to provide a frame Private Network involving Yuma, Phoenix, & Tucson locations. The pricing schedule below includes the local loop and data service charges. The Dedicated Dial up locations will be $25 per account with a $25 install fee.

WinStar GoodNet VPN Pricing per location

Port Speed	Monthly Recurring 1-Year Term	Monthly Recurring 3-Year Term	Monthly Recurring 5-Year Term
Yuma			
56Kbps	$200.00	$190.00	$180.00
Install Fee	$500.00	$500.00	$500.00
Phoenix			
384Kbps	$500.00	$480.00	$460.00
Install Fee	$630.00	$630.00	$630.00
Tucson			
384Kbps	$500.00	$480.00	$460.00
Install Fee	$630.00	$630.00	$630.00
GoodNet			
T1(1.54Mbps)	$1,300.00	$1,200.00	$1,000.00
Install Fee	$1000.00	$1,000.00	$1,000.00
Total Monthly Costs	$2,500.00	$2,350.00	$2,100.00
Total Install Fees	$2,760.00	$2,760.00	$2,760.00

Please review the information and I look forward to further discussing how this was received next week. If you need to reach me prior, please call 602-303-9500 x3113 or e-mail me at brockr@good.net.

Sincerely,

Brock Robertson
Regional Sales Manager

GoodNet

ELECTRIC LIGHTWAVE

Service Proposal: Technical Air Balance
Requested By: [redacted]
Service: 2 T-1 connections, 36 DSOs
Phone: [redacted]
Fax: [redacted]
Date: 6/19/98

[redacted]

I have prepared a quote for two T-1 circuits with 36 Two way trunks to your headquarters at [redacted] Phoenix, AZ.

	MONTHLY	NRC
Three Year Contract	$ 1,356.00 ($37.50 per line)	**$1,265.00
Five Year Contract	$ 1,272.00 ($35.30 per line)	**$ 1,365.00
Local Loop Charge	$ 308.50 (each T-1)	**$ 626.58(each T-1)

The NPA NXX numbers used in this price quote are 602[redacted] and 602[redacted]. The above prices is for each T-1 connection.

**Install costs are waived under current promotion if ordered by June 26th. Normal NRC charges are as shown above.

Please Note: Price Quotes are good for 30 days

If you have questions do not hesitate to contact me at 602.277.1122 Ext. 650.

Thank you for the opportunity to bid on this business, and I look forward to working with you.

Best Regards,

R. E. Glissendorf

Richard E. Glissendorf
Account Executive
Electric Lightwave Inc.

NOTE: NRC = Non Recurring Charges

BARBARA M. WILCOX

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF BARBARA M. WILCOX
STATE OF COLORADO)	)	
COUNTY OF DENVER	)	
	) :)	SS

Barbara M. Wilcox, of lawful age being first duly sworn, deposes and states:

1. My name is Barbara M. Wilcox. I am Director – Product and Market Issues of U S WEST Communications in Denver, Colorado.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Barbara M. Wilcox
Barbara M. Wilcox

SUBSCRIBED AND SWORN to before me this 17th day of December, 1998.

Maija Beck
Notary Public

My Commission Expires:
May 8, 2000

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

BARBARA M. WILCOX PH.D.

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

The purpose of my Direct Testimony is to discuss and support price and structure revisions to U S WEST's switched access, private line transport and public access line services, and the withdrawal of Scoopline^{SM} service. My testimony also includes advocacy for pricing flexibility for these finished wholesale products, consistent with U S WEST Competitive Zone proposal.

Switched access service is provided by U S WEST to interexchange carriers for the purpose of connecting these carriers to their end-user customers via the local switched network. In 1995, significant price reductions and restructures of U S WEST's Arizona switched access prices were accomplished. In the present filing, U S WEST proposes to further restructure and reduce switched access prices. The net revenue impact of these proposals is a $5.0 million reduction in annual revenues.

Private line services are dedicated, direct connections between two or more points. U S WEST has completed a review of each of the individual price elements in the Private Line Transport Tariff, taking into consideration the current costs for each element, the price of competing services, and the need to meet the revenue requirements that exist in Arizona. The resulting price adjustments produce a net $6.3 million increase in private line and digital data service prices.

Public Access Line (PAL) services provide access to the switched telephone network for payphone service providers. U S WEST proposes to withdraw the obsolete customer-owned coin operated telephone service options and move the current customers to equivalent services offered in the PAL tariff. This change produces a net reduction of $3.1 thousand in annual revenues. U S WEST also proposes to increase the directory assistance prices for PAL customers. The current prices are below cost. The revenue impact for increases in directory assistance charge to PAL customers is $1.7 million.

Scoopline^{SM} is an intraLATA public announcement service whereby U S WEST delivers calls and bills end-user customers on behalf of a sponsor. The end-user reaches the sponsor's information service by dialing a 976 or 676 telephone number. Local public announcement services are being displaced by interexchange carrier's 900 services, which can be offered nationwide. U S WEST proposes to discontinue offering Scoopline^{SM} service.

Competitive zones are areas in which U S WEST has competition for local telephone service. Mr. Teitzel describes U S WEST's proposal for pricing flexibility for retail products in competitive zones. The presence of competition in these zones also impacts U S WEST's finished wholesale services, such as switched access, private line, and PAL services. In competitive zones, U S WEST also proposes to introduce flexible pricing for wholesale services.

IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Barbara M. Wilcox. I work for U S WEST Communications, Inc. ("U S WEST" or "Company"). My title is Director - Product and Market Issues, with responsibility for finished wholesale services. My business address is 1801 California St., Denver, Colorado.

Q. BRIEFLY OUTLINE YOUR EMPLOYMENT AND EDUCATIONAL BACKGROUND.

A. I have been a member of U S WEST's (formerly Mountain Bell's) staff since 1980, working in the areas of market research and analysis, pricing and product management.

Before joining Mountain Bell, I held college and university faculty positions and was a consultant in the fields of market research, behavioral research and psychology. I earned a B.A. degree magna cum laude in psychology from Colorado College. I earned M.A. and Ph.D. degrees in experimental psychology from Brown University as a National Science Foundation Fellow.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS OR ANY OTHER COMMISSION?

A. Yes, I appeared before this Commission in the remand of Docket No. E-1051-93-183 and in Docket No. E-1051-97-024. I have filed written testimony and/or appeared as an expert witness for U S WEST Communications before the Public Utilities Commissions in Colorado, Iowa, Minnesota, Montana, Nebraska, New Mexico, Oregon, South Dakota, Utah, Washington and Wyoming. A more detailed description of my qualifications and experience is contained in my Exhibit BMW-1

PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present U S WEST Communication's changes affecting switched access, private line transport, public access line (PAL), and Scoopline^{SM} services. I also explain how U S WEST's proposal for pricing flexibility in competitive zones will be applied to these products and services.

I describe switched access service and how it allows long distance carriers to reach their customers via the local switched network; I review switched access price structure and price levels, their history and recent changes; and I present U S WEST's changes in switched access prices for Arizona and explain why these changes are needed in view of the changing telecommunications environment.

I describe private line services and U S WEST's proposals for changes in their prices. U S WEST's private line proposals affect the following price categories for analog private line, and digital data services:

- Network Access Channel
- Transport Mileage
- Channel Performance
- Optional Features and Functions

I describe public access line (PAL) services and explain U S WEST's proposals to simplify the PAL tariff as well as the price changes for directory assistance charges to PAL subscribers.

I describe U S WEST's Scoopline^{SM} public announcement service. Information providers have largely moved to alternative services with regional or national scope, and U S WEST is now withdrawing its intraLATA Scoopline^{SM} service.

Finally, I explain why U S WEST's competitive zone proposal encompasses finished wholesale services, as well as retail services. I describe how the proposal's pricing flexibility applies to switched access, private line and PAL services.

Q. HOW DO THE RECOMMENDATIONS IN YOUR TESTIMONY IMPACT ANNUAL REVENUES IN THIS RATE CASE FILING?

A. My recommendations produce the following revenue impacts. Switched access revenues decrease $5.0 million. Private line revenues increase $6.3 million. PAL revenues decrease $3.1 thousand. Directory assistance revenues for PAL will increase $1.7 million.

SWITCHED ACCESS SERVICE

Description of Switched Access Service

Q. WHAT IS SWITCHED ACCESS SERVICE AND TO WHOM IS IT SOLD?

A. Switched access is provided for the purpose of allowing providers of long distance services (interexchange carriers) to reach their customers (end-users) via U S WEST's local switched network. I will refer to the customer who places or receives the long distance call as the "end-user". I will refer to the customer who purchases switched access service in order to provide long distance service to end-users as the "long distance carrier", also known as an "interexchange carrier" (IXC). Long distance carriers can provide service either through their own facilities or by reselling someone else's service or facilities.

U S WEST provides to the long distance carrier, switched access transmission paths extending from the carrier's premises (point of presence or POP) through the telephone company's switched network within a Local Access Transport Area (LATA). (See Exhibit BMW-2). These paths provide end-users with access to long distance carriers for the purpose of initiating a long distance call and also provide a carrier with access to an end-user for the purpose of terminating a long distance call. These services are referred to as originating and terminating access. Both originating and terminating access are subject to switched access service charges, which cover the cost of routing and switching these calls. These charges also provide contribution in support of the general revenue requirements for telephone company operations in Arizona.

Originally, switched access service was designed to be sold by local exchange companies to interexchange carriers. Today, U S WEST's switched access service is still used by long distance carriers to reach many of their customers via U S WEST's local switched network. However, with the changes in the telecommunications industry, and the emergence of alternative providers, for local and other services, alternatives to U S WEST switched access services are continuously increasing. These alternatives include direct connection between the long distance carrier and its customers, which, can be provided via U S WEST's private line services or another provider's facilities. Private networks, originally built for data transmission, are also being used for local and long distance voice traffic. Wireless services, Internet telephony and e-mail provide substitutes for traditional long distance service. Competitive local exchange carriers offer direct competition to U S WEST's switched access service.

Q. WEREN'T SOME CHANGES MADE IN ARIZONA'S ACCESS CHARGES IN THE LAST RATE CASE?

A. Yes. A major restructure of access charges, as well as a sizable reduction in the overall prices of the access charges, was accomplished in Docket No. E-1051-93-183. These changes were implemented in 1995. The reductions decreased switched access charges approximately $3.4 million. In addition, a restructure of the local transport charges (Local Transport Restructure or LTR) was implemented, which brought the structure of Arizona's transport prices into consistency with the structure then current for interstate prices. The transport rates were disaggregated to align the charges with the manner in which the transport services are actually provisioned. Under this structure, customers pay for the transport services they actually use. Currently the switched access averaged weighted rate is 4.5 cents per minute.

Q. WERE ALL THE NEEDED CHANGES IN SWITCHED ACCESS CHARGES ACCOMPLISHED IN THE CHANGES YOU JUST DESCRIBED?

A. Many needed changes were accomplished, most notably the transport restructure and a decrease in prices. At the same time, the environment in which U S WEST operates has continued to change, and further structure and rate changes are now needed. New transport elements and adjustments to the transport structure are needed to remain consistent with the FCC's transport structure.

Structure of Switched Access Charges

Q. PLEASE EXPLAIN HOW THE ACCESS PRICES ARE CURRENTLY STRUCTURED IN ARIZONA.

A. Historically, there have been three categories of price elements for switched access service: (1) local switching, (2) local transport, and (3) carrier common line. A fourth charge, the interconnection charge, was added when Arizona's local transport charges were restructured in

1995. There are also installation (nonrecurring) charges and other miscellaneous charges and credits in the access tariff.

The local switching charge compensates U S WEST for switching the call. The local switching charge applies for each minute-of-use an end-user is connected through a telephone company end office (central office). This charge recovers traffic-sensitive costs associated with the central office switch and for incidental operator costs, such as call intercept.

The local transport charges compensate U S WEST for transporting the call between the central office serving the end-user (end office) and the interexchange carrier's point of presence (POP). The attached Exhibit BMW-3 shows the current structure of the transport charges. Usage-sensitive charges apply to tandem-switched transport, for which U S WEST experiences traffic-sensitive costs. These charges are applied on each tandem-switched minute-of-use at varying prices, depending on the distance of the actual transport. Monthly flat charges are applied for direct-trunked transport, also depending on the distance of the transport. Monthly flat charges apply to dedicated facilities, for which the costs are not sensitive to traffic volumes. There are also monthly flat charges for multiplexers and for entrance facilities connecting the carrier's POP with the serving wire center

The carrier common line (CCL) charge today provides revenue contribution in support of basic telephone service for end-users. There are no direct access costs associated with this price element since it is generally related to the recovery of U S WEST's non-traffic sensitive (NTS) costs associated with the ubiquitous provision of basic telephone service. The CCL applies to all access minutes-of-use except the usage associated with the closed ends of WATS and 800 service.

The interconnection charge (IC) was created as a result of Local Transport Restructure (LTR). The IC provides contribution to common, shared, and embedded costs and support of basic telephone service. This charge is applied to all intrastate switched access minutes-of-use.

Proposed Local Transport

Q. PLEASE DESCRIBE THE PROPOSED CHANGES FOR LOCAL TRANSPORT.

A. I propose to add four new elements to the local transport charges to more closely align with the FCC structure. The FCC added these new transport elements to the interstate switched access charges and made other associated transport changes in its 1996 Access Charge Reform Order. Additional transport price changes are also being made to update the tariff. The current and proposed prices are shown in Exhibit BMW-5.

Q. HOW WILL THE NEW TRANSPORT PRICES BE STRUCTURED?

A. The four new price elements are Tandem Trunk Port, Common Transport Multiplexing, and End Office Shared Port, associated with tandem-switched transport; and End Office Dedicated Trunk Port, which is associated with direct-trunked transport between serving wire center and end office (See Exhibit BMW-4 for new structure). In addition, the option to pay for tandem-switched transport between the access tandem and the serving wire center is replaced with the requirement to purchase direct-trunked transport. Any multiplexing associated with this direct-trunked transport to the tandem will also be charged for separately. Coincident with this change, tandem transmission mileage will now be measured between the access tandem and the end office. These changes are all consistent with the FCC's 1996 access reform structure.

Q. PLEASE DEFINE THE NEW PRICE ELEMENTS.

A. Tandem Trunk Port is provided for each dedicated trunk terminated on the serving wire center side of the access tandem when a customer has requested tandem routing. The cost of the tandem trunk port was previously included in the tandem switching cost. Under the new structure this cost is disaggregated from tandem switching and recovered in a separate price element. This charge will be assessed monthly for each trunk terminating on the tandem switch.

Common Transport Multiplexing equipment is used on the end office side of the access tandem when common transport is provided between the access tandem and the subtending end offices. Common transport multiplexing was previously included in tandem transmission charges on a minute-of-use basis and is being disaggregated. This new price element will be assessed on tandem switching minutes-of-use.

End Office Shared Port provides for the termination of common transport trunks to the end office. End office shared port was previously included as part of the local switching cost and will be disaggregated as well. This element will be assessed on tandem switching minutes-of-use.

End Office Dedicated Trunk Port provides for termination of a dedicated trunk at the end office when the customer has requested direct-trunked transport. End office dedicated trunk port was previously included in the local switching cost. Under the new structure this cost will be disaggregated from local switching and will become a separate price element. This charge will be assessed monthly for each trunk terminating on the end office switch.

Q. WHY IS U S WEST MAKING STRUCTURE CHANGES TO THE LOCAL TRANSPORT CHARGES?

A. The new elements and structure move U S WEST towards more pricing efficiency, directing cost recovery towards the cost causer. The new elements have already been introduced in U S WEST's interstate tariff, and this change will provide consistency between the state and interstate transport price structures.

Q. HOW WILL THIS NEW STRUCTURE BENEFIT THE LONG DISTANCE CARRIERS?

A. Because the new structure provides consistency with the FCC structure approved in the 1996 Access Reform Order, billing validation will be easier for the carriers. Also, the new structure is consistent with the carriers' requests to more directly align prices with costs.

Q. ARE THERE ANY OTHER PROPOSED CHANGES FOR LOCAL TRANSPORT?

A. Yes. The prices of various other transport elements are being adjusted in light of changes made in the interstate jurisdiction since interstate local transport restructure was established.

Q. DOES U S WEST PROPOSE ANY ADDITIONAL CHANGES?

A. Yes. U S WEST proposes to update the common channel signaling access capability (CCSAC) transport charges to be consistent with the switched access LTR structure. All transport price changes are shown on Exhibit BMW-5.

Proposed Local Switching

Q. PLEASE DESCRIBE THE PROPOSED CHANGES FOR LOCAL SWITCHING.

A. The local switching price structure will be bifurcated to allow for different prices for originating and for terminating traffic should the market require it.

Q. WHY IS U S WEST PROPOSING THE BIFURCATION OF LOCAL SWITCHING?

A. In the future, as new competition develops and carriers can substitute other services for switched access service, differing rates for originating and terminating switching may become necessary. The bifurcation of local switching to an originating and terminating minute-of-use structure will enhance pricing flexibility in the future.

Q. WILL BIFURCATING LOCAL SWITCHING EFFECT ITS CURRENT PRICE?

A. No. The price for local switching originating and terminating minutes-of-use are set equal to each other. The price for both originating and terminating local switching minutes-of-use will remain at its current price of 1.73 cents.

Proposed Interconnection Charge

Q. EXACTLY WHAT CHANGES ARE BEING PROPOSED FOR THE INTERCONNECTION CHARGE?

A. The interconnection charge is being reduced, thus producing a $5.0 million net reduction in switched access charges. This reduction will lower the switched access average weighted rate from 4.5 to 4.2 cents per minute.

Q. WHY IS A PRICE REDUCTION APPROPRIATE FOR SWITCHED ACCESS SERVICE AT THIS TIME?

A. Even though a significant price reduction was made in 1995, switched access continues to be priced at relatively high contribution levels. Since 1995, competition for telecommunications services has expanded in scope. Competition prevails, not just for long distance and private line services, but also extends to the core of telecommunications, to local exchange service. U S WEST seeks to price switched access at a level that provides contribution to the core business, and also keeps its prices competitive. In addition, end-user customers benefit through long distance price reductions since AT&T has an obligation to pass through its access cost reductions to end-users and other carriers are most likely to follow AT&T's lead. [1]

[1] See Decision No. 55953, Docket No. U-2428-86-268, at p.26.

Q. HOW DOES COMPETITION FOR LOCAL EXCHANGE SERVICE IMPACT SWITCHED ACCESS?

A. Quite simply, there is direct impact because the carrier that supplies local exchange service to a given end-user customer also controls the switched access to that customer. Therefore, the price of switched access service is one of the ingredients in the economic analysis which determines how competitive U S WEST can be in the marketplace.

Proposed Carrier Directory Assistance

Q. PLEASE DESCRIBE CARRIER DIRECTORY ASSISTANCE.

A. Carrier directory assistance (DA) provides use of directory assistance access equipment and use of U S WEST's DA operators to provide telephone numbers to customers of long distance carriers.

Q. WHO ARE THE CUSTOMERS FOR CARRIER DIRECTORY ASSISTANCE?

A. Long distance carriers purchase directory assistance from U S WEST's access tariffs and resell it to their end-user customers.

Q. WHAT ARE THE PROPOSED CHANGES TO CARRIER DIRECTORY ASSISTANCE?

A. I am proposing to increase the charge per use for directory assistance to 35 cents per call. The revenue impact is approximately $5 thousand. Additionally, directory assistance transport charges are being changed.

Q. WHY IS THIS CHANGE NEEDED?

A. The current charge to carriers for DA is 22 cents, which is below its cost. An increase in price is needed to bring the charge of DA above the costs the company incurs to provide the service. Directory assistance transport charges are being changed to be consistent with switched access transport charge changes.

Switched Access Nonrecurring Charges

Q. PLEASE IDENTIFY THE PROPOSED NONRECURRING ELEMENTS THAT WILL BE CHANGING.

A. Selected nonrecurring charges are being increased to cover costs. In addition, U S WEST proposes to revise the maintenance of service charges and structure. This proposed change applies for both switched access and private line services.

Q. HOW IS MAINTENANCE OF SERVICE APPLIED TODAY?

A. When a customer reports a repair problem the Company first performs tests of U S WEST's facilities from the company's central office. If no trouble is found in these tests, U S WEST subsequently makes a visit to the customer's premises to isolate the problem. If no trouble is still found in the company's facilities, a premises work charge is assessed. The premises work charge is only charged if U S WEST dispatches a technician to the customer's premises.

Q. WHAT IS THE CHANGE THAT U S WEST PROPOSES TO MAKE IN THE APPLICATION OF THIS CHARGE?

A. U S WEST will apply a maintenance of service charge per half-hour when completed testing indicates that the repair problem is not in equipment or communication systems provided by U S WEST. The maintenance of service charges will apply whether a premises visit is made or not, and will be billed to the customer where the problem exists. Maintenance of service rates will be introduced to replace the reference to premises work charges. Additionally, a dispatch charge will also apply if a technician is dispatched to the customer's premises. Of course, none of these charges will be assessed if trouble is found in U S WEST facilities or equipment.

Switched Access Summary

Q. WHAT IS THE NET IMPACT OF ALL THE PROPOSED CHANGES TO SWITCHED ACCESS SERVICES?

A. The overall net impact of price changes to switched access results in a $5.0 million reduction in annual revenues.

PRIVATE LINE TRANSPORT SERVICES

Description of Private Line Services

Q. WHAT ARE PRIVATE LINE TRANSPORT SERVICES?

A. Private line services are a collection of transport services that provide direct connections for customers between two or more locations. These connections are dedicated to the use of the customer purchasing the private line service. In my testimony, I discuss low-capacity private line services. Ms. Karen Stewart presents U S WEST's proposals for high-capacity private line services in her testimony.

Q. WHO ARE THE CUSTOMERS WHO BUY THESE SERVICES?

A. The majority of the customers buying private line services are businesses. A business customer may purchase a private line to connect two or more business locations or to connect their business with a long distance carrier (also known as special access service). A private line service can be used for voice communications or for data transmission. Analog Private Line Services are available for transporting low speed data and alarm signals, and for provisioning voice grade services, including Foreign Exchange Service, Foreign Central Office and Telephone Answering Service. Digital Private Line Service, called DIGICOM I and DIGICOM II Services in Arizona, offers digital speeds ranging from 2.4 kilobits per second (kbps) up to and including 64 kbps. Generally, private line services are used in situations where large volumes of telecommunications traffic need to be carried between two or more fixed points.

Q. WHAT ARE THE BASIC SERVICE ELEMENTS THAT COMPRISE A PRIVATE LINE SERVICE?

A. See my Exhibit BMW-6, which is a typical 2-point Private Line circuit diagram. There are four basic elements that are used to provide private line services. All elements are not necessarily required for every private line configuration. The four elements are Network Access Channel, Channel Performance, Transport Mileage, and Optional Features and Functions. In the following sections I will describe these specific parts of private line services and the price changes that I am proposing.

Network Access Channel

Q. WHAT IS A NETWORK ACCESS CHANNEL?

A. A Network Access Channel (NAC) is the transmission path between the customer's premises or designated location and the U S WEST central office serving that location (serving wire center). These connections are used for all two- or four-wire private line services. A NAC is required for each customer location connected to a private line network. A two-point circuit has two NACs, and a multi-point circuit can have more than two NACs.

Q. WHAT ARE U S WEST'S PROPOSALS FOR NETWORK ACCESS CHANNEL RATES?

A. U S WEST proposes to establish the rate for a two-wire NAC at $28 per month, and the rate for a four-wire NAC at $56. The current rate is $11.50 for a two-wire and $23 for a four-wire channel. This price change is shown on Exhibit BMW-7.

Q. WHY IS U S WEST MAKING THIS PROPOSAL?

A. U S WEST's proposal increases NAC prices to raise rates above the price floor determined by total service long run incremental cost (TSLRIC) plus shared cost, improve contribution levels and to move toward pricing levels that are more reflective of both costs and market conditions.

Q. WHAT IS THE TOTAL REVENUE IMPACT OF U S WEST'S NETWORK ACCESS CHANNEL PROPOSALS?

A. The network access channel proposals for analog private line services will result in an overall annual increase in revenue of $9.2 million.

Channel Performance

Q. WHAT IS CHANNEL PERFORMANCE?

A. Channel performance is the rate element which covers the costs for electronic equipment that generates specific transmission performance characteristics of a given service. The charges vary by type of service (e.g., Narrowband, Voiceband/Data, etc.) and by configuration (e.g., two-point or multi-point, inter- or intra-wire center, etc.). Within these categories, channel performance elements are used to provide for specific transmission attributes required by the customer's equipment. For example, within the voice grade category several different channel performances are available. Each of these channel performance parameters represents different transmission and interface characteristics necessary to meet technical parameters of various customer premises equipment used in a private line circuit.

Q. PLEASE DESCRIBE U S WEST'S PROPOSALS FOR CHANNEL PERFORMANCE RATES AND YOUR SUPPORTING RATIONALE.

A. U S WEST proposes to increase certain channel performance rate elements so that they will be priced above the price floor. U S WEST also proposes to reduce prices on some channel performance rate elements. Overall, channel performance prices are being decreased. Details of U S WEST's proposals for channel performance are detailed in my Exhibit BMW-7.

Q. WHAT IS THE REVENUE IMPACT OF U S WEST'S CHANNEL PERFORMANCE PROPOSALS?

A. U S WEST's channel performance proposals will decrease annual revenue by $1.2 million.

Q. ARE ANY OTHER CHANGES BEING MADE REGARDING CHANNEL PERFORMANCE OFFERINGS?

A. Yes, I also propose to grandfather Local Area Data Service (LADS), and to eliminate the Voice Grade Basic service.

Q. WHAT IS LOCAL AREA DATA SERVICE?

A. LADS is a two-point dedicated private line service that is provisioned over metallic facilities. It is available on either a 2-wire or 4-wire basis, and can connect two points, no more that six route miles apart (3 miles per end from serving wire center) that are served by the same wire center. It offers a circuit that is suitable for data transmission over limited distances.

Q. WHY IS U S WEST PROPOSING TO GRANDFATHER LOCAL AREA DATA SERVICE?

A. With less than 175 circuits in service in Arizona, LADS has a very small market demand. It is essentially a "raw copper" circuit that was introduced years ago to meet a limited market for data transmission between locations served by a common wire center. LADS circuits have the potential to be used to transmit data at speeds much higher than these circuits were ever intended to deliver. This unintended use can cause customer complaints when the circuit fails at these high speeds, and they also have the potential for causing interference with adjacent circuits along the same transmission path. Higher quality circuits are available for guaranteeing these high speed applications. Therefore, U S WEST proposes to grandfather LADS, thereby limiting it to the existing inventory of circuits.

Q. WHY IS U S WEST PROPOSING TO ELIMINATE VOICE GRADE BASIC SERVICE?

A. Voice grade basic service is a 2-point voice grade connection limited to connections between two locations served by the same wire center. Voice grade basic has little demand. There are only five circuits now in service in Arizona. No signaling is provided with this circuit. If this service is eliminated these 5 circuits will be converted to voice grade 32 service with no signaling, which at the proposed prices will result in a savings of $2 per month over voice grade basic.

Transport Mileage

Q. WHAT IS TRANSPORT MILEAGE?

A. Transport mileage rate elements cover the cost of the portion of a transmission path that lies between central offices and is used with all two- and four-wire interoffice private line circuits.

Q. WHAT COMPRISES TRANSPORT MILEAGE RATES?

A. Transport mileage rates include both a "fixed" rate element (a monthly dollar value that is constant within a mileage band regardless of the length of a circuit) and a "per-mile" rate element (a monthly value which varies according to the interoffice mileage of a circuit). There are currently four mileage bands for all Private Line Transport Services.

Q. WHAT ARE U S WEST'S PROPOSALS FOR TRANSPORT MILEAGE RATES AND THE CORRESPONDING RATIONALE?

A. U S WEST proposes to adjust prices for Arizona's transport mileage so they are more closely aligned with costs. This will be accomplished by increasing the "fixed" rate element and reducing the "per-mile" rate element for all mileage bands. Higher monthly rates are proposed for the three higher Audio Services bands in recognition of their greater bandwidth capacities. These proposed analog private line transport mileage changes are shown in Exhibit BMW-8.

Q. WHAT IS THE REVENUE IMPACT OF U S WEST'S TRANSPORT MILEAGE PROPOSALS?

A. The annual revenue impact of U S WEST's recurring transport mileage rate proposals is a decrease of $1.3 million.

Optional Features and Functions

Q. WHAT ARE OPTIONAL FEATURES AND FUNCTIONS?

A. Optional Features and Functions provide options to improve the quality or utility of a private line transport service to meet specific customer requirements. Examples of these options include bridging, conditioning, and transfer arrangements.

Q. WHAT PROPOSALS DOES U S WEST HAVE FOR OPTIONAL FEATURES AND FUNCTIONS?

A. U S WEST proposes to increase bridging rates for services that are below costs. Decreases are also being made to some bridging and conditioning options. The details of these proposals are shown on my Exhibit BMW-9.

Q. WHAT IS THE REVENUE IMPACT OF U S WEST'S PROPOSALS FOR OPTIONAL FEATURES AND FUNCTIONS?

A. The annual revenue effect of this portion of U S WEST's overall proposal is a net decrease of $65 thousand.

Nonrecurring Charges

Q. WHAT CHANGES ARE YOU PROPOSING FOR PRIVATE LINE NONRECURRING CHARGES?

A. The nonrecurring charges, which are applied when a customer installs or changes a private line service, are being simplified to be more consistent across services and to align prices more closely with costs. This involves both price increases and price decreases. The specific prices being changed are shown in my Exhibit BMW-10.

U S WEST also proposes to modify prices and price structure for some private line miscellaneous nonrecurring charges. The design change charge is being increased from $63 to $70. Prices for additional engineering and labor are being increased and simplified to just one half-hour charge for all half-hour increments. These miscellaneous nonrecurring changes are applicable to all private line services and they result in an additional annual revenue of $6. thousand, as shown on the last page of Exhibit BMW-10.

As I've already described under Switched Access Nonrecurring Charges, U S WEST is introducing charges for maintenance of service to replace the current reference to premises work charges. The maintenance of service charges displayed on page 3 of Exhibit BMW-5 will also apply to private line services.

Q. WHAT IS THE REVENUE IMPACT OF U S WEST'S PROPOSALS FOR NONRECURRING CHARGES?

A. The annual revenue effect of this portion of U S WEST's overall proposal is an increase of approximately $108 thousand.

Digital Data Service

Q. WHAT IS DIGITAL DATA SERVICE (DDS)?

A. Digital Data Service (DDS) is offered under the name DIGICOM I and DIGICOM II Service in Arizona. This proposal will combine DIGICOM I and II into the U S WEST regional standard Digital Data Service offering. It is a private line transport service providing point-to-point transmission of digital data at various speeds up to and including 64 kilobits per second. DDS is used in situations where a customer needs digital data transmission, but does not have large enough volumes of data to warrant use of a high-capacity service, such as DS1 Service which is capable of 1.54 megabits per second.

Q. IS U S WEST PROPOSING ANY CHANGES TO THE PRICES OF DIGITAL DATA SERVICE?

A. Yes, U S WEST is proposing to increase the monthly price for a network access channel from $31.50 to $56. DDS utilizes a four-wire NAC and this change will make all 4-wire NAC prices consistent with each other. This price increase will be partially offset by price reductions for channel performance at the higher data speeds. Transport mileage for DDS will be priced with one fixed and one per-mile price for all mileage bands, which overall will reduce DDS transport revenue. Proposed prices are shown on Exhibit BMW-11.

Q. WHAT IS THE REVENUE IMPACT OF THE CHANGES TO DDS?

A. The net effect is a $490 thousand decrease in annual revenues.

Private Line Summary

Q. WHAT IS THE TOTAL ANNUAL REVENUE IMPACT OF ALL U S WEST PRIVATE LINE PROPOSALS?

A. The net annual revenue impact of all of these private line price changes is a $6.3 million increase.

PUBLIC ACCESS LINE (PAL) SERVICE

Description of PAL

Q. PLEASE DESCRIBE PUBLIC ACCESS LINE SERVICE .

A. Public Access Line (PAL) Service provides telecommunications network access to Payphone Service Provider (PSP) pay telephones. PAL Service is provided under the categories of Basic and Smart PAL Service. Basic PAL Service is a voice grade line used by PSPs to connect "smart" pay telephone equipment to the U S WEST network. Smart PAL Service is a pay telephone access line with inherent coin control functions provided by the Company's central office. The Smart PAL is used by PSPs to connect "dumb" pay telephone equipment to the U S WEST Network.

Proposed Public Access Line

Q. WHAT CHANGES ARE BEING PROPOSED FOR PUBLIC ACCESS LINE SERVICE?

A. U S WEST proposes to eliminate two Basic PAL options; Coinless Subscriber Service – Step-by-Step Offices Outgoing Only and Coinless Subscriber Service – Step-by-Step Offices Two-way. These line options are no longer required, because Step-by-Step Offices have been eliminated in Arizona.

Existing customers will be converted to the equivalent service offering, Coinless Subscriber Service – ESS Offices, with no impact to their service or rates.

Proposed Directory Assistance

Q. ARE YOU PROPOSING OTHER CHANGES RELATIVE TO PUBLIC ACCESS LINES?

A. Yes, I am proposing that the price for Directory Assistance from PAL lines be increased from $.15 per call to $.60 per call. The service is purchased by payphone providers for the resale to their end user customers. As proposed, this service will be expanded to include access to national as well as local telephone numbers. In addition call completion service, in which the DA operator dials the call for customer, will be offered for alternately billed calls, i.e., calling card, third number, etc. Those calls will be priced at the proposed rate of $.85 per call. Long distance charges will apply to any completed long distance call.

Q. WHY ARE THESE CHANGES BEING MADE?

A. First of all the present price of $.15 is significantly below cost. It is also readily apparent, as stated in Mr. Teitzel's testimony, that other providers offer directory assistance products that include both local and national telephone numbers. Although their services include call completion, they are priced significantly higher than my proposed price. This proposal to combine local and national directory assistance into one product is consistent with the proposal for end-user directory assistance stated in Mr. Teitzel's testimony.

Q. WHAT IS THE REVENUE EFFECT OF THIS PROPOSED CHANGE?

A. This price change will increase annual revenue by $1.7 million.

Customer-Owned Coin Operated Telephone (COCOT) Access Lines

Q. ARE YOU PROPOSING ADDITIONAL CHANGES TO LINES THAT ARE SUBSCRIBED TO BY PAYPHONE SERVICE PROVIDERS?

A. Yes. U S WEST is proposing to withdraw the Customer-Owned Coin Operated Telephone (COCOT) Access Lines that currently exist in the Obsolete Exchange Services Section of the tariff.

Q. WHY ARE YOU PROPOSING TO WITHDRAW THE CUSTOMER-OWNED COIN OPERATED TELEPHONE (COCOT) ACCESS LINES FROM THE OBSOLETE TARIFF?

A. U S WEST's proposal to withdraw the COCOT Tariff is being made to benefit both U S WEST and the COCOT customer. U S WEST proposes to simplify the tariff and remove this offering that has been frozen to new customers since December, 1990. There are 545 lines, and equivalent service is available in the PAL tariff. More importantly, most of these customers would see a price decrease in their access line costs by converting to an equivalent service in the PAL tariff. All rates for the COCOT services and the equivalent PAL services are shown in Exhibit BMW-12.

Q. WHAT IS THE REVENUE IMPACT OF ELIMINATING COCOT LINES AND CONVERTING EXISTING CUTOMERS TO EQUIVALENT PAL SERVICES?

A. The net revenue impact is $3.1 thousand.

PUBLIC ANNOUNCEMENT SERVICES

Description of Public Announcement Services

Q. WHAT ARE PUBLIC ANNOUNCEMENT SERVICES?

A. U S WEST currently offers one public announcement service in Arizona. It is known as Scoopline℠ Service. Scoopline℠ Service consists of service and facilities for sponsor-provided pre-recorded announcements or interactive programs within the Phoenix and Tucson LATAs. This service enables an end-user client, for a charge, to dial a Scoopline℠ telephone number and receive a Scoopline℠ sponsor's pre-recorded announcement or to participate in an interactive program. As an integral part of the service, the Company will deliver calls and bill clients on behalf of the sponsor. In order to reach the information service, the client dials a 976 telephone number in the Phoenix LATA, or a 676 telephone number in the Tucson LATA.

Q. WHO ARE THE CUSTOMERS FOR SCOOPLINE℠?

A. Information Providers subscribe to Scoopline℠ service in order to provide information announcement or other interactive or enhanced services to their clients. The information provider is also known as the sponsor of the information service.

Q. PLEASE EXPLAIN THE STRUCTURE OF SCOOPLINE℠ SERVICE IN ARIZONA.

A. Scoopline℠ service has two components. The first is the network access itself, consisting of the telephone line and its associated telephone number, usage, etc. The second component is a billing and collection service whereby U S WEST bills clients for their use of the information service and remits the money to the Scoopline℠ provider.

Scoopline℠ Proposal

Q. DESCRIBE THE PROPOSED CHANGES FOR SCOOPLINE℠ SERVICE.

A. U S WEST proposes to eliminate and remove from its tariff the Scoopline℠ offering.

Q. WHY IS U S WEST PROPOSING TO ELIMINATE THE SERVICE?

A. The service is no longer meeting customers needs and should be discontinued. Information services are generally offered on a national or regional basis. U S WEST's Scoopline^{SM} service (like all of U S WEST's services) is limited by the LATA boundaries. Because U S WEST cannot offer a statewide, regional, or national service, there are very few information providers still subscribing to Scoopline^{SM} service.

Q. ARE THERE CURRENTLY CUSTOMERS SUBSCRIBED TO THE SERVICE?

A. There are currently only three subscribers to Scoopline^{SM}, with nine lines currently in service in Arizona. Those remaining customers have been made aware of U S WEST's intent to discontinue the service offering.

Q. WHAT ALTERNATIVES ARE AVAILABLE TO CURRENT SUBSCRIBERS OF SCOOPLINE^{SM}?

A. Interexchange carriers offer 900 services on a regional or national basis. These 900 services provide sponsors with the network access, telephone number, etc. that they need in order to offer their information services. Furthermore, 900 services offered by interexchange carriers are not geographically restricted like U S WEST's Scoopline^{SM} service.

PRICING FLEXIBILITY PROPOSAL

Competitive Zones

Q. WHAT ARE COMPETITIVE ZONES?

A. Competitive zones consist of the areas in which U S WEST experiences competition for local telephone service. Mr. David Teitzel provides more detailed information on U S WEST's competitive zone proposal in his testimony.

Q. WHY IS COMPETITIVE ZONES NECESSARY?

A. Competitive zones will help to focus on areas where competition actually exists. In each identified area, U S WEST needs to price its products and services flexibly to more effectively compete in the marketplace.

Q. WHAT WILL HAPPEN WHEN A COMPETITIVE ZONE HAS BEEN IDENTIFIED?

A. Within each wire center identified as having local competition, U S WEST can exercise its ability to more effectively compete by charging prices dictated in that marketplace. Mr. Teitzel has delineated the types of price changes U S WEST will be able to implement in competitive zones without prior regulatory review. Pricing flexibility will allow U S WEST to react quickly and set prices that are consistent with the competitive marketplace.

Pricing Flexibility for Wholesale Services

Q. WHAT IS MEANT BY PRICING FLEXIBILITY?

A. Pricing flexibility allows the company to strategically move prices upward and downward within a defined range as the marketplace dictates.

Q. WILL THE PROPOSED PRICE RANGES FOR PRICING FLEXIBILITY BE PRESENTED TO THE ARIZONA CORPORATION COMMISSION FOR APPROVAL?

A. The Arizona Corporation Commission will review and approve price floors and price ceilings proposed by U S WEST. U S WEST is asking for the establishment of those floors and ceilings in this rate case.

Q. WHY IS PRICING FLEXIBILITY NECESSARY IN ARIZONA?

A. As Mr. Teitzel describes, pricing flexibility is needed in Arizona due to the presence of competition for all aspects of telephone service. Local service competition means that there is underlying competition for wholesale services. Each time a competitive local provider gains an end-user customer, U S WEST loses switched access or long distance revenue associated with that customer for U S WEST.

Q. ARE YOU SAYING THAT PRICING FLEXIBILITY IS ALSO NEEDED FOR WHOLESALE, AS WELL AS RETAIL SERVICES IN THE COMPETITIVE ZONE?

A. Yes. Finished wholesale services such as private line, switched access and public access lines are subject to the same competitive pressures as retail services.

Q. WHICH WIRE CENTERS ARE INCLUDED IN U S WEST'S REQUEST FOR PRICING FLEXIBILITY FOR FINISHED WHOLESALE SERVICES?

A. U S WEST is requesting pricing flexibility for finished wholesale services in all of the wire centers listed by Mr. Teitzel as being competitive. Competition for both residence and business local exchange service has direct impact on switched access, as well as other finished wholesale services. Therefore, U S WEST's proposal is that any wire center that is declared competitive for either residence or business services also is declared competitive for finished wholesale.

Q. IS IT SAFE TO ASSUME THAT U S WEST WILL NOT SUFFER SIGNIFICANT COMPETITIVE LOSSES UNTIL COMPETITIVE PROVIDERS ARE WELL ENTRENCHED IN THE LOCAL TELEPHONE MARKET IN ARIZONA?

A. No, it is not. U S WEST is experiencing competitive losses in its carrier access services in Arizona today. Even before there were competitors for switched services, there was competition for private line services. Competitive private line services bypass and replace both U S WEST's private line and switched access services.

Q. WHAT IS THE IMPACT OF COMPETITION ON U S WEST'S PRIVATE LINE BUSINESS?

A. Because U S WEST has no direct way of knowing how large the total private line market is, U S WEST has hired an outside research firm to assess the market in the Phoenix area. Based on customer interviews the pattern is clear. In the areas of the cities served by competitors, U S WEST's private line market share is continuously declining. Exhibit BMW-13 shows the results of that research for Phoenix, as well as for two other cities where the competition began a little earlier than in Phoenix. The pattern of declining market share is consistent in all three cities. Competitors are swiftly installing private line circuits, and these new circuits allow for the complete bypass of switched access and U S WEST private line services.

Q. IN WHAT WAY DOES THE COMPETITION FOR PRIVATE LINE SERVICES IMPACT SWITCHED ACCESS SERVICES?

A. As competition heats up for private line services, increased sales activity makes businesses more aware of their options, such as installing a private line circuit to connect with one or more long distance carriers. Price competition among private line providers makes it more economical for a business customer to install a dedicated private line circuit. In many cases, these new private line circuits replace switched basic exchange circuits, such as PBX trunks or 1FB lines. Market research shows that a very substantial amount of the growth in high capacity private line services in Phoenix in the fourth quarter of 1997 was accounted for by this kind of replacement of switched services (See Exhibit BMW-14). This tells us that competition is not only eroding U S WEST's market share for private line services, but at the same time is also impacting our basic switched services. Market research shows that less than half the long distance traffic going in and out of Phoenix today travels via switched access (See Exhibit BMW-15). The competitive pressures on switched access service have intensified as competitors offer switched access, private line services, and local telephone service in Arizona.

Q. ARE THERE OTHER CONDITIONS WHICH WILL AFFECT ACCESS SERVICES AND REVENUES?

A. Yes. The ability of competitive providers to offer packaged local, and interlata and intralata long distance telephone services places increased pressure on the switched access market. By offering one-stop-shopping for local, intralata, and interlata calling, these companies make their services attractive to customers who don't want to deal with the complications of multiple suppliers. Furthermore, by combining local with long distance services they can totally cut U S WEST out of any switched access traffic that might otherwise go to or from these customers.

Q. ARE CURRENT COMPETITORS COMBINING LOCAL WITH LONG DISTANCE SERVICE IN ARIZONA?

A. Yes. ELI, e.spire (ACSI), and Cox are currently offering competitive local exchange service along with long distance services. Sixty-five companies have filed for certification as local service providers in Arizona, and 16 of these companies currently have approved certificates and tariffs. In addition, AT&T's merger with TCG means that AT&T will use TCG's facilities to speed its entry into the local market, and totally bypass U S WEST's local transport.

Q. HOW WILL THE ADVENT OF COMPETITION FOR LOCAL TELEPHONE SERVICE AFFECT SWITCHED ACCESS SERVICE?

A. As I discussed earlier in my testimony, there will be a substantial impact. Each time U S WEST loses an existing or potentially new end-user customer to a facilities-based competitive local service provider, the Company also loses the ability to collect switched access charges for long distance calls going to and from that end-user.

Q. IF U S WEST BEGINS LOSING SIGNIFICANT MARKET SHARE AND SWITCHED ACCESS REVENUES BEGIN TO DECLINE, WHAT IS THE IMPACT ON U S WEST AND ITS CUSTOMERS?

A. The impacts are potentially far-reaching. Because of the contribution margins contained in the switched access prices, the revenue stream produced by switched access service plays a significant role in U S WEST's ability to cover common and shared costs and to maintain its ubiquitous switched network. This creates a dilemma for the Company, because these revenues play a significant role in our ability to continue to provide basic telephone service under our obligations as carrier of last resort.

Q. YOU'VE DESCRIBED THE IMPACT OF COMPETITION ON SWITCHED ACCESS AND PRIVATE LINE SERVICES. DOES COMPETITION ALSO IMPACT PAL SERVICE?

A. Most definitely. If a competitive local exchange carrier offers basic telephone service in a given geographical area, it can also connect payphones in that area to its network. Competition for PAL services goes hand-in-hand with competition for local telephone service.

Q. HOW WILL PRICE FLEXIBILITY IN COMPETITIVE ZONES HELP IN THIS SITUATION?

A. The competitive zone proposal will allow U S WEST to compete with alternative providers by meeting their pricing proposals in the zones where they operate. At the same time, U S WEST will not be forced to immediately reduce wholesale prices statewide, thus avoiding unnecessary premature withdrawal of support for residential phone service. This proposal is an important step to allow responsible transition to a fully competitive marketplace.

Pricing

Q. WHAT PRICES WILL BE CHARGED IN THE COMPETITIVE ZONES FOR FINISHED WHOLESALE SERVICES?

A. The prices proposed in this filing would be the prices charged as U S WEST begins its pricing flexibility in the competitive zones.

Q. DOES THIS FILING INCLUDE CEILING LEVELS?

A. Yes. As Mr. Teitzel has explained, U S WEST is proposing price ceilings at two times the actual price. This ceiling will apply to finished wholesale services as well as retail services.

Q. PLEASE EXPLAIN HOW CUSTOMERS BENEFIT FROM PRICING FLEXIBILITY.

A. Customers will benefit in having an opportunity to pick and choose the best packaged and priced services that fit their specific needs. At the same time, the support for basic residential services that have traditionally come from switched access will not be immediately removed. This will enable U S WEST to continue to fulfill its carrier-of-last resort responsibilities and customers to continue to have affordable service.

CONCLUSIONS AND RECOMMENDATIONS

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. U S WEST's proposals seek price changes and some structure changes for switched access, private line, PAL and SCOOPLINE^{SM} services. The structure and price levels assure cost coverage and alignment of prices for an increasingly competitive environment. The PAL and Scoopline^{SM} proposals will remove obsolete services and simplify the tariffs.

U S WEST's competitive zone proposal should be applied to finished wholesale services as well as retail services. In particular, switched access, private line and PAL services should be flexibly priced inside of competitive zones.

Q. WHAT DO YOU RECOMMEND TO THE COMMISSION?

A. I recommend that the Commission adopt U S WEST's proposals for switched access, private line, PAL and Scoopline^{SM} services. Further, I recommend that U S WEST's competitive zone proposal be adopted in its entirety, including the application of pricing flexibility to finished wholesale services within the competitive zones.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

EXHIBITS OF

BARBARA M. WILCOX PH.D.

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

QUALIFICATIONS AND EXPERIENCE
Barbara M. Wilcox

EDUCATION

B.A. Magna cum laude (Liberal Arts and Psychology) Colorado College, 1963.
Ph.D. & M.A. (Experimental Psychology) Brown University, 1967 & 1965.
Graduate Study in Business, University of Texas at Dallas, 1977-1979.
Classes and seminars in marketing, pricing, economics, telecommunications, 1980-present.

EMPLOYMENT HISTORY

U S WEST Communications (Mountain Bell), Denver, Colorado: 1980 to present

Director, Product and Market Issues (present position)
Group Manager, State Access Pricing (1990-1995)
Product Manager (1987-1990)
Pricing Manager (1986-1987)
Demand and Market Analysis Group Leader (1983 -1986)
Demand Analyst (1981-1983)
Market Research Analyst (1980-1981)

University of Texas at Dallas: 1977 to 1978

Visiting Associate Professor of Psychology and Human Development

Bishop College, Dallas, Texas: 1967 to 1977

Acting Chairperson, Psychology Department (1973-1975, 1976-1977)
Associate Professor of Psychology (1972-1977)
Assistant Professor of Psychology (1967 to 1972)

Zale Learning Center, Dallas, Texas: 1974 - 1975

Research Director for Infant Day Care Program

CONSULTING

Trailways, Inc., Dallas, Texas
Abt Associates, Cambridge, Massachusetts

MEMBERSHIPS

American Marketing Association
American Psychological Association

HONORS

Phi Beta Kappa
Sigma Xi
National Science Foundation Fellow
Boettcher Scholar

PUBLICATIONS

Authored and co-authored papers published in:

Merrill-Palmer Quarterly
Journal of Experimental Child Psychology
Journal of Music Therapy

Editorial reviewer for:

Infant Behavior and Development
Journal of Experimental Child Psychology

TESTIMONY AND APPEARANCES BEFORE STATE REGULATORY BODIES

Arizona

Docket No. E-1051-93-183. Remanding of Decision No. 58927. In the Matter of the Application of U S WEST Communications for a Hearing to Determine the Earnings of the Company, the Fair Value of the Company for Rate Making Purpose, to Fix a Just and Reasonable Rate of Return Thereon and to Approve Rate Schedules Designed to Develop Such Return.

Docket No. E-1051-97-024. In the Matter of the Application of U S WEST Communications, Inc., Filing to Revise its Network Services Tariff. (Public Access Line Service.)

Colorado

I & S Docket No. 1766 Investigation and Suspension of Proposed Changes and Additions to Exchange and Network Services Tariff -- Telephone, Mountain States Telephone and Telegraph Company, Denver, Colorado 80202.

Docket No. 96S-257T. Application of U S WEST Communications, Inc. for Modification of its Rate and Service Regulation Program.

Docket Nos. 97F-175T, 97K-237T, 97F-212T. MCI Telecommunications Corporation, Complainant, vs. U S WEST Communications, Inc., Respondent and AT&T Communications of the Mountain States, Inc., Complainant, vs. U S WEST Communications, Inc., Respondent.

Docket No. 97R-173T. Proposed Amendments to the Rules Regulating Telecommunications Service Providers and Telephone Utilities, 4 CCR 723-2; and the Rules Regulating Operator Service Providers, 4 CCR 723-18.

Docket No. 98F-146T Colorado Payphone Association, a Colorado non-profit corporation, Complainant vs. U S WEST Communications, Inc., Respondent.

Iowa

Docket No. RPU-95-11. U S WEST Communications, Inc. Rate Rebalancing Proposal.

Docket No. RPU-69-3. U S WEST Communications, Inc. Proposed Tenant Solutions Tariff.

Minnesota

Docket No. P-999/C-93-90. Commission Solicitation of Comments Regarding Access Charges.

Montana

Docket Nos. 86.11.64 & 86.11.62 Sub 11 Application of the Mountain States Telephone and Telegraph Company for Authority to Establish Rates and for Approval of Generic Cost and Rate Design Methodology in Connection with the Implementation of its Comprehensive Rural Telephone Improvement Program.

Docket No. 88.1.2. Application of the Mountain States Telephone and Telegraph Company for Authority to Establish Rates and for Approval of Tariff Changes for Telecommunications Service..

Docket Nos. 90.12.86, 89.8.28, 89.8.29, 89.9.29, 90.5.32. Application of U S WEST Communications for Approval of an Alternative Form of Regulation and associated dockets.

Docket No. 94.1.6. Application of U S WEST Communications, Inc. for Approval of Tariffs Reducing Revenues by $6,032,749.16, Tariff Transmittal 94-5.

Docket No. D96.4.70. U S WEST Communications, Inc. Proposed Restructure of Carrier Common Line Charge for Intrastate Switched Access.

Docket No. D96.12.220. Application of U S WEST Communications, Inc. to Restructure its Regulated Telecommunications Service.

Nebraska

Docket No. C-1273. Application by the Nebraska Telephone Association for a Subscriber Line Charge.

Application No. C-1519. Emergency Petition of MCI Telecommunications Corporation and AT&T Communications of the Midwest, Inc., to Investigate Compliance of Nebraska LECs with FCC Payphone Orders.

Application No. C-1628. In the Matter of the Nebraska Public Service Commission on Its Own Motion, Seeking to Conduct an Investigation into Intrastate Access Charge Reform and Intrastate Universal Service Fund

Application No. C-1874. In the Matter of the Application of U S WEST Communications, Inc. for Authority to Increase its Residential Basic Local Exchange Rates Pursuant to Neb. Rev. Stat. Section 86-803(9).

New Mexico

Docket No. 95-778-TC. Application of Brooks Fiber Communications of New Mexico. Inc. for Certificate of Public Convenience and Necessity to Provide Intrastate Telecommunications Services Within the State of New Mexico.

Docket No. 96-461-TC. In the Matter of the Revision of the New Mexico Access Service Tariff.

Docket No. 97-69-TC. In the Matter of Compliance with Federal Regulations of Payphones.

North Dakota

North Dakota Legislative Council - Presentation to Regulatory Reform Review Commission on history and role of switched access charges. December 11, 1997.

Oregon

Docket UT 113. In the Matter of the Revised Rate Schedules Filed by GTE Northwest, Inc.
Docket UM 351. Investigation into the Cost of Providing Telecommunications Services.
Docket No. UT 125. Request of U S WEST Communications, Inc. for an Increase in Rates and Charges.

South Dakota

Docket TC 91-040A & B. Investigation into the adoption of a uniform access methodology and establishment of a state-wide pool.
Docket RM 92-001. Adoption of administrative rules for intrastate switched access service.
Docket RM 94-002. Adoption of revisions to administrative rules.
Docket No. TC 96-107. U S WEST Communications Switched Access Compliance Filing.
Docket No. TC 97-006 U S WEST Communications Smart PAL Tariff Filing.

Utah

Docket 94-049-08. Request of U S WEST Communications Inc. for an Increase in its Rates and Charges.
Docket 95-049-05. Request of U S WEST Communications Inc. for an Increase in its Rates and Charges.
Docket No. 97-049-08. Request of U S WEST Communications Inc. for an Increase in its Rates and Charges.

Washington

Docket UT-941464. Washington Utilities and Transportation Commission, Complainant v. U S WEST Communications, Inc., Respondent.
Docket UT-950200. Request of U S WEST Communications Inc. for the Increase in its Rate and Charges.
Docket No. UT-970658. MCI Telecommunications Corporation and AT&T Communications of the Pacific Northwest, Inc., Complainants, vs. U S WEST Communications, Inc., GTE Northwest, Inc. and United Telephone Company of the Northwest, Respondents.

Docket No. UT-970325. Petition for Investigation into the Cost of Universal Service and to Reform Intrastate Carrier Access Charges.

Wyoming

Docket No. 70000-TA-93. Application of U S WEST Communications, Inc. to Change or Restructure Local Exchange Rates, Intrastate Access Service Rates, Service Connection Charges and Certain Other Rates.

Docket No. 70000-TR-238, Phases 1 & 2., Docket No. 70000-TR-96-323. Price Regulation Plan of U S WEST Communications Inc.

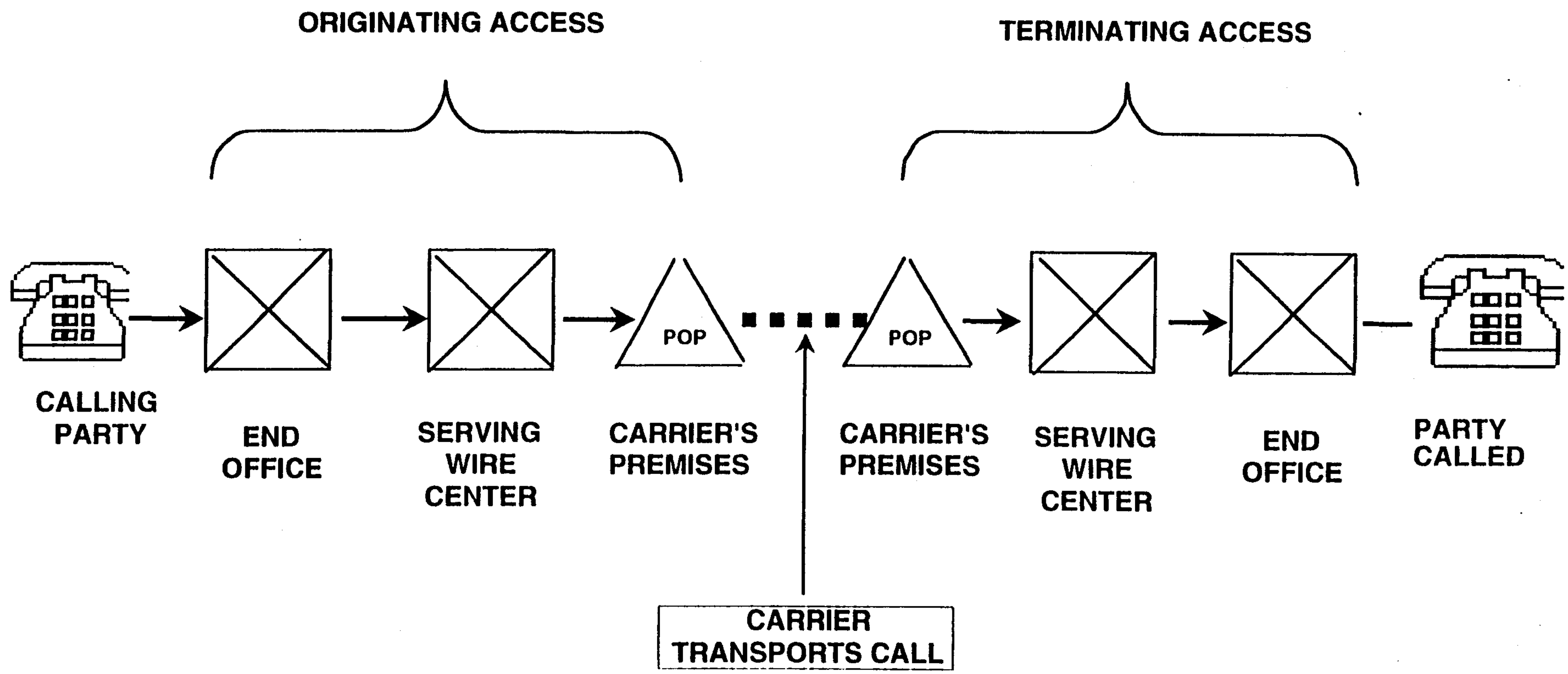
General Order No. 79. Commission's Investigation Regarding the Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Federal Telecommunications Act of 1996.

General Order No. 74. Investigation by the Wyoming Public Service Commission into the Appropriate Method for Calculating Intrastate Switched Access Charges and Regarding the Feasibility of Eliminating Intercompany Subsidies Among Wyoming Telephone Utilities.

Docket No. 70000-TR-98-420 Application of U S WEST Communications, Inc. for Authority to Implement Price Ceiling in Conjunction with its Proposed Wyoming Price Regulation Plan for Essential and Noncompetitive Telecommunications Services. (1998 Price Plan)

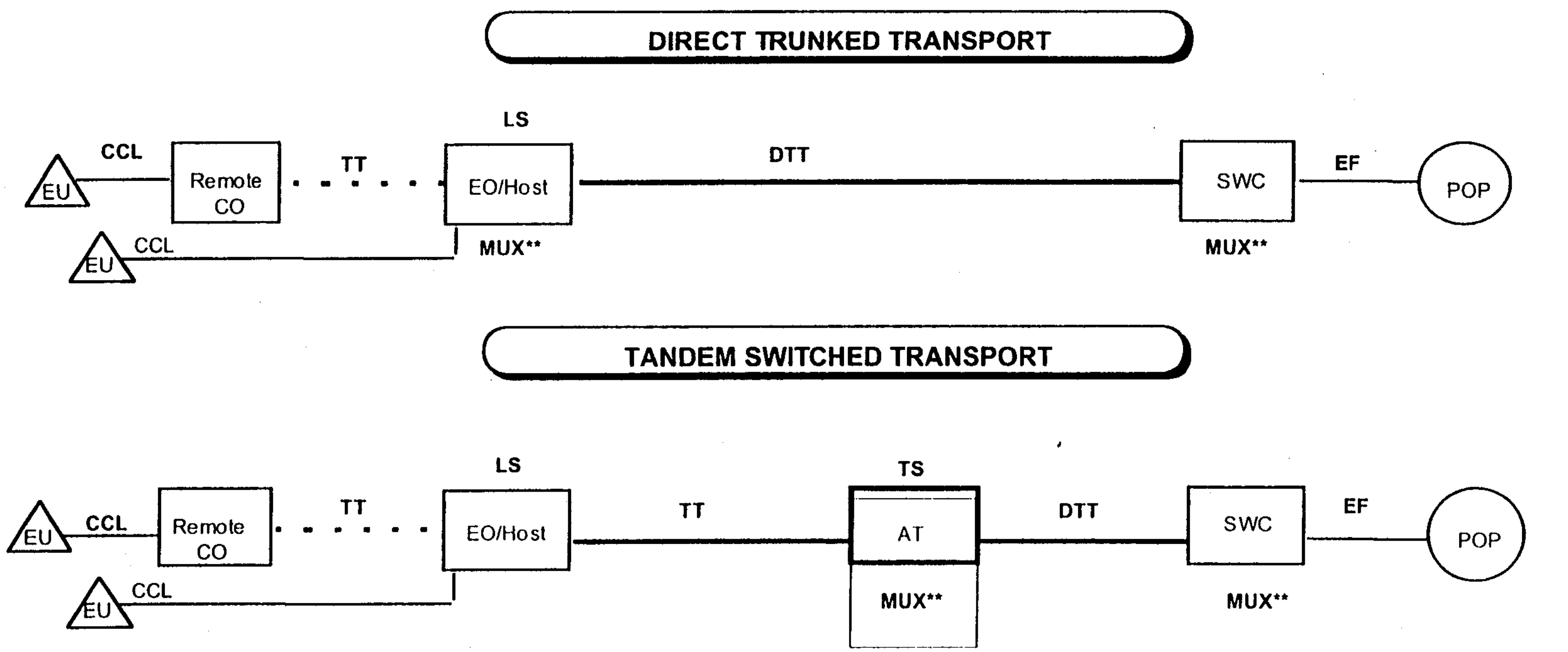
USWEST COMMUNICATIONS

SWITCHED ACCESS NETWORK DIAGRAM



US WEST COMMUNICATIONS

Current Switched Access Price Structure



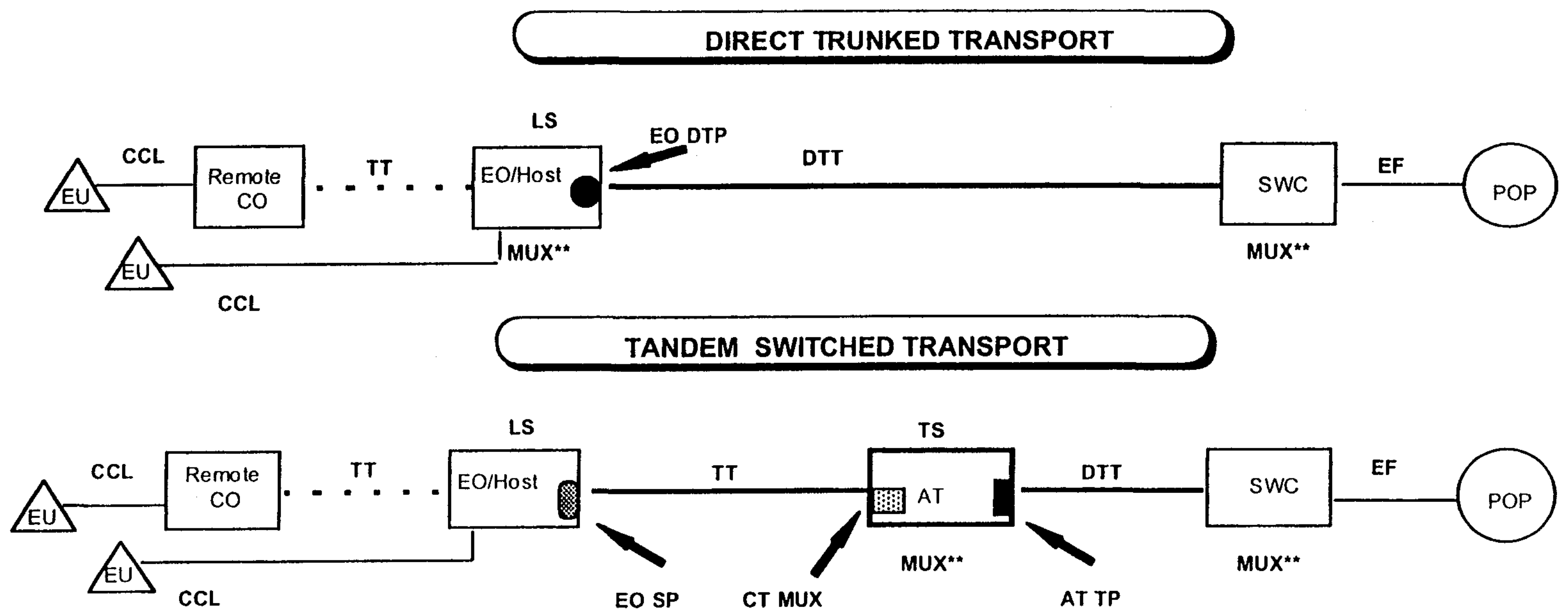
POP	- Point of Presence
SWC	- Serving Wire Center
AT	- Access Tandem
EO	- End Office
EU	- End User

<u>Rate Elements</u>

EF	- Entrance Facility
DTT	- Direct Trunked Transport
TT	- Tandem Transmission
TS	- Tandem Switching
MUX**	- Optional Multiplexer
LS	- Local Switching
CCL	- Carrier Common Line

US WEST COMMUNICATIONS

Proposed Switched Access Price Structure



POP	- Point of Presence
SWC	- Serving Wire Center
AT	- Access Tandem
EO	- End Office
EU	- End User

Existing Rate Elements

EF	- Entrance Facility
DTT	- Direct Trunked Transport
TT	- Tandem Transmission
TS	- Tandem Switching
MUX**	- Optional Multiplexer
LS	- Local Switching
CCL	- Carrier Common Line

Additional Rate Elements

EO DTP	- End Office Dedicated Trunk Port
EO SP	- End Office Shared Port
AT TP	- Access Tandem Trunk Port
CT MUX	- Common Transport Multiplexing

Arizona Current and Proposed Switched Access Prices

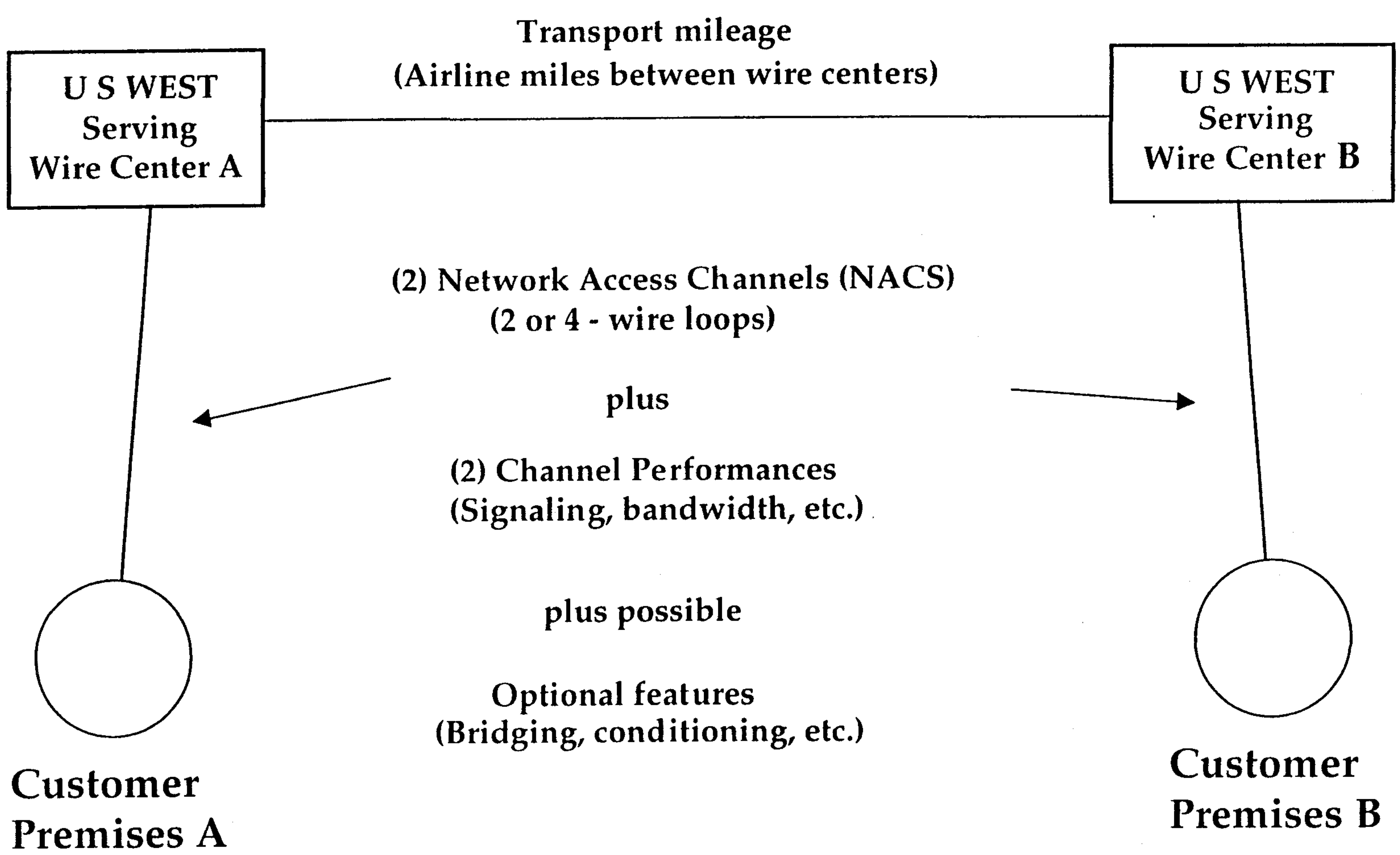
	Current		Proposed	
RECURRING CHARGES				
DIRECT TRUNKED TRANSPORT	Fixed Per Month	Per Mile Per Month	Fixed Per Month	Per Mile Per Month
VOICE GRADE				
0 MILE				
OVER 0 - 8 MILES	$12.55	$0.80	$25.96	$0.17
OVER 8 - 25 MILES	$12.15	$0.85	$25.96	$0.17
OVER 25 - 50 MILES	$9.50	$1.05	$25.96	$0.17
OVER 50 MILES	$8.50	$1.10	$32.45	$0.52
TANDEM SWITCHED TRANSPORT				
TANDEM TRANSMISSION	Per Minute	Per Minute Per Mile	Per Minute	Per Minute Per Mile
0 MILE				
OVER 0 - 8 MILES	$0.000431	$0.000024	$0.000199	$0.000020
OVER 8 - 25 MILES	$0.000480	$0.000025	$0.000224	$0.000020
OVER 25 - 50 MILES	$0.000490	$0.000025	$0.000242	$0.000022
OVER 50 MILES	$0.000551	$0.000027	$0.000265	$0.000023
		Per Minute		Per Minute
TANDEM SWITCHING		$0.006750		$0.005000
		Per Month		Per Month
ENTRANCE FACILITIES Voice Grade		$25.50		$63.45
		Per Minute		Per Minute
END OFFICE SHARED PORT		-		$0.001300
		Per Minute		Per Minute
COMMON TRANSPORT MULTIPLEXING		-		$0.000137
		Per Month		Per Month
TANDEM TRUNK PORT		-		$6.59
		Per Month		Per Month
END OFFICE DEDICATED TRUNK PORT		-		$9.01
		Per Minute		Per Minute
INTERCONNECTION CHARGE		$0.006212		$0.002127
LOCAL SWITCHING		Per Minute		Per Minute
Originating		$0.017300		$0.017300
Terminating		$0.017300		$0.017300
CARRIER COMMON LINE		Per Minute		Per Minute
Originating		$0.010000		$0.010000
Terminating		$0.024200		$0.024200
		Per Minute		Per Minute
MESSAGE UNIT CREDIT		($0.004013)		($0.000441)
COMMON CHANNEL SIGNALING ACCESS CHANNEL				
DSO			Fixed Per Month	Per Mile Per Month
0 MILE				
OVER 0 - 8 MILES			$25.96	$0.17
OVER 8 - 25 MILES			$25.96	$0.17
OVER 25 - 50 MILES			$25.96	$0.17
OVER 50 MILES			$32.45	$0.52
		Per Month		Per Month
STP PORT		$850.00		$465.00

DIRECTORY ASSISTANCE	Current		Proposed	
DIRECT TRUNKED TRANSPORT	Fixed Per Month	Per Mile Per Month	Fixed Per Month	Per Mile Per Month
VG				
0 MILE				
OVER 0 - 8 MILES	$12.55	$0.80	$25.96	$0.17
OVER 8 - 25 MILES	$12.15	$0.85	$25.96	$0.17
OVER 25 - 50 MILES	$9.50	$1.05	$25.96	$0.17
OVER 50 MILES	$8.50	$1.10	$32.45	$0.52
TANDEM SWITCHED TRANSPORT				
TANDEM TRANSMISSION	Per Call	Per Call Per Mile	Per Call	Per Call Per Mile
0 MILE				
OVER 0 - 8 MILES	$0.000178	$0.000010	$0.000117	$0.000012
OVER 8 - 25 MILES	$0.000198	$0.000010	$0.000131	$0.000012
OVER 25 - 50 MILES	$0.000202	$0.000010	$0.000142	$0.000013
OVER 50 MILES	$0.000228	$0.000011	$0.000155	$0.000013
	Per Call		Per Call	
TANDEM SWITCHING	$0.002788		$0.002928	
COMMON TRANSPORT MULTIPLEXING	Per Call		Per Call	
	-		$0.000080	
	Per Month		Per Month	
TANDEM TRUNK PORT	-		$6.59	
	Per Call		Per Call	
INTERCONNECTION	$0.002566		$0.001245	
	Per Call		Per Call	
DA SERVICE CALL	$0.22		$0.35	
	Per Call		Per Call	
DA CREDIT	$0.015200		$0.019582	

Arizona Current and Proposed Switched Access Prices

NONRECURRING CHARGES		
Additional Engineering	Current	Proposed
Basic Time		
1st Half Hour	$23.00	$30.00
Each Add'l Half Hour	$23.00	$30.00
Overtime		
1st Half Hour	$29.00	$40.00
Each Add'l Half Hour	$29.00	$40.00
Additional Labor (Installation)		
Overtime		
1st Half Hour	$6.00	$9.00
Each Add'l Half Hour	$6.00	$9.00
Premium Time		
1st Half Hour	$11.00	$17.00
Each Add'l Half Hour	$11.00	$17.00
Additional Labor (Other)		
Basic Time		
1st Half Hour	$19.00	$28.00
Each Add'l Half Hour	$19.00	$28.00
Overtime		
1st Half Hour	$24.00	$36.00
Each Add'l Half Hour	$24.00	$36.00
Premium Time		
1st Half Hour	$29.00	$45.00
Each Add'l Half Hour	$29.00	$45.00
Additional Cooperative Acceptance Testing		
Basic Time		
1st Half Hour	$19.00	$28.00
Each Add'l Half Hour	$19.00	$28.00
Overtime Time		
1st Half Hour	$25.00	$36.00
Each Add'l Half Hour	$25.00	$36.00
Premium Time		
1st Half Hour	$31.00	$45.00
Each Add'l Half Hour	$31.00	$45.00
Nonscheduled Cooperative Testing		
Basic Time		
1st Half Hour	$19.00	$28.00
Each Add'l Half Hour	$19.00	$28.00
Overtime Time		
1st Half Hour	$24.00	$36.00
Each Add'l Half Hour	$24.00	$36.00
Premium Time		
1st Half Hour	$29.00	$45.00
Each Add'l Half Hour	$29.00	$45.00
Nonscheduled Manual Testing		
Basic Time		
1st Half Hour	$19.00	$28.00
Each Add'l Half Hour	$19.00	$28.00
Overtime Time		
1st Half Hour	$24.00	$36.00
Each Add'l Half Hour	$24.00	$36.00
Premium Time		
1st Half Hour	$29.00	$45.00
Each Add'l Half Hour	$29.00	$45.00
Maintenance of Service		
Basic Time - Each Half Hour	-	$27.00
Overtime - Each Half Hour	-	$36.00
Pemium Time - Each Half Hour	-	$45.00
Design Changes	$63.00	$70.00

Private Line Diagram



Private Line Network Access Channel and Channel Performance Prices

ELEMENT/SERVICE	USOC	PRESENT PRICE	PROPOSED PRICE
NETWORK ACCESS CHANNEL (NAC)			
2-WIRE	1DC2X	11.50	28.00
4-WIRE	1DC4X	23.00	56.00
NAC ANNUAL REVENUE EFFECT			
CHANNEL PERFORMANCE			
LOW SPEED DATA			
(END-LINK/MID-LINK)			
LS1	PCW3X	5.00	7.00
LS2	PCW4X	16.00	16.00
MT3	PJWAX	1.50	7.00
TG1	PCW5X	30.00	30.00
TG2	PCW6X	35.00	35.00
(END-TO-END)			
LS31 CONTROL	PCWSX	13.35	12.00
LS31 MCCULLOH	PCWTX	4.62	8.50
LS31 DC CHANNEL	PCWWX	1.50	6.00
LS31 TELEGRAPH			
0 - 75 BAUD	PCWUX	30.00	18.00
0 - 150 BAUD	PCWVX	35.00	20.00
VOICE GRADE			
(END-LINK/MID-LINK)			
VG1			
NO SIGNALING	PCWEX	7.50	8.00
LOOP START	PCWYX	18.70	18.50
GROUND START	PCWJX	14.70	15.00
VG2			
NO SIGNALING	PCWEX	8.05	10.00
LOOP START - LA	PCWAX	18.00	14.00

Private Line Network Access Channel and Channel Performance Prices

ELEMENT/SERVICE	USOC	PRESENT PRICE	PROPOSED PRICE
- LB	PCWBX	16.00	14.75
- LC	PCWCX	14.50	14.50
- LO	PJWCX	10.00	10.00
- LS	PJWHX	11.50	14.00
SF SIGNALING	PCWZX	21.15	18.00
MANUAL RINGDOWN	PCWFX	23.69	25.00
AUTO RINGDOWN	PCWGX	13.00	16.50
CODE-SELECT	PCWHX	10.50	22.50
VG3			
NO SIGNALING	PCWEX	9.50	7.45
LOOP START	PCWYX	21.00	20.00
GROUND START	PCWJX	21.00	17.00
E & M SIGNALING	PCWKX	21.50	19.00
SF SIGNALING	PCWZX	36.00	22.00
REVERSE BATTERY	PCW1X	11.00	11.00
TYPE - DX	PJWOX	15.10	15.00
TYPE - DY	PJWPX	13.90	15.00
VG5			
NO SIGNALING	PCWEX	5.18	10.00
DATA STREAM	PCWLX	21.00	16.00
VG6			
NO SIGNALING	PCWEX	13.80	10.00
DATA STREAM	PCWLX	21.00	16.00
VG7			
NO SIGNALING	PCWEX	9.50	10.00
LOOP START - LA	PCWAX	23.00	17.00
- LB	PCWBX	21.90	16.00
- LC	PCWCX	24.50	14.50
- LO	PJWCX	11.60	10.00
- LS	PJWHX	14.00	13.00

Private Line Network Access Channel and Channel Performance Prices

ELEMENT/SERVICE	USOC	PRESENT PRICE	PROPOSED PRICE
GROUND START	PCWJX	12.70	12.70
E&M SIGNALING	PCWKX	17.40	20.00
SF SIGNALING	PCWZX	22.10	22.00
TYPE - DX	PJWOX	12.75	15.00
TYPE - DY	PJWPX	12.75	15.00
VG8			
LOOP START	PCWYX	27.50	22.00
E&M SIGNALING	PCWKX	18.60	21.00
SF SIGNALING	PCWZX	17.50	22.00
VG-9			
NO SIGNALING	PCWEX	6.90	11.00
E&M SIGNALING	PCWKX	20.13	20.00
SF SIGNALING	PCWZX	17.50	17.50
VG10			
NO SIGNALING	PCWEX	4.65	10.00
DATA STREAM	PCWLX	21.00	17.00
VG12			
DATA STREAM	PCWLX	21.00	17.00
(END-TO-END)			
VG32			
NO SIGNALING	PCWEX	8.05	8.00
LOOP START - LA	PCWAX	18.00	12.00
- LB	PCWBX	16.00	12.00
- LC	PCWCX	14.50	10.00
- LG	PCW8X	18.50	15.00
- LO	PJWCX	10.00	8.00
- LS	PJWHX	11.50	9.50
MAN. RINGDOWN	PCWFX	10.50	8.00

Private Line Network Access Channel and Channel Performance Prices

ELEMENT/SERVICE	USOC	PRESENT PRICE	PROPOSED PRICE
AUTO RINGDOWN	PCWGX	13.00	8.00
CODE SEL. RINGDN	PCWHX	10.50	8.00
VG33			
NO SIGNALING	PCWEX	9.50	9.50
E & M SIGNALING	PCWKX	21.50	16.25
REV BAT SIG	PCW1X	7.90	10.00
VG36			
DATA STREAM	PCWLX	21.00	15.50
VOICE GRADE BASIC			
NO SIGNALING	PCWEX	3.00	9.00
LOCAL AREA DATA SERVICE (LADS)			
NO SIGNALING	PCWXX	5.45	8.00
(DSAS) DATAPHONE SELECT-A-STATION			
END TO END	PJW7X	14.00	15.00
END LINK MID LINK	PJW7X	14.20	15.00
AUDIO			
(END-LINK/MID-LINK)			
AP1	PJW1X	3.25	8.00
AP2	PJW2X	13.26	15.00
AP3	PJW3X	15.40	16.00
AP4	PJWBX	26.20	26.00
(END-TO-END)			
AP31	PCWNX	3.25	8.00
AP32	PCWOX	13.26	12.00
AP33	PCWQX	15.40	13.50
AP34	PJW5X	26.20	26.00

Private Line Network Access Channel and Channel Performance Prices

ELEMENT/SERVICE	USOC	PRESENT PRICE	PROPOSED PRICE
FX			
LOOP ST	PJWEX	24.42	18.00
GR ST	PJWKX	24.42	18.00
REV BAT	PJWLX	24.42	18.00
FCO			
LOOP ST	PJWFX	8.48	8.00
GR ST	PJWMX	8.48	8.00
REV BAT	PJWZX	19.25	8.00
EXCHANGE SERVICE EXTNS	PJWGX	6.50	9.50
TAS	PJWJX	5.85	9.50

Private Line Transport Mileage Prices

	ELEMENT	USOC	PRESENT PRICE	PROPOSED PRICE
TRANSPORT MILEAGE				
	Fixed-Over 0 to 8	FQYX1	17.00	17.00
	Fixed-Over 8 to 25	FQYX2	17.00	17.00
	Fixed-Over 25 to 50	FQYX3	17.00	17.00
	Fixed-Over 50	FQYX4	17.00	17.00
	Per Mi.-Over 0 to 8	3LBXA	1.00	0.65
	Per Mi.-Over 8 to 25	3LBXB	1.10	0.75
	Per Mi.-Over 25 to 50	3LBXC	1.45	1.00
	Per Mi.-Over 50	3LBXD	1.45	1.05
AUDIO				
AP 1 OR AP 31	Fixed-Over 0 to 8	FQYX1	17.00	17.00
	Fixed-Over 8 to 25	FQYX2	17.00	17.00
	Fixed-Over 25 to 50	FQYX3	17.00	17.00
	Fixed-Over 50	FQYX4	17.00	17.00
	Per Mi.-Over 0 to 8	3LBXA	1.00	0.65
	Per Mi.-Over 8 to 25	3LBXB	1.10	0.75
	Per Mi.-Over 25 to 50	3LBXC	1.45	1.00
	Per Mi.-Over 50	3LBXD	1.45	1.05
AP 2 OR AP32	Fixed-Over 0 to 8	FQYX1	34.00	34.00
	Fixed-Over 8 to 25	FQYX2	34.00	34.00
	Fixed-Over 25 to 50	FQYX3	34.00	34.00
	Fixed-Over 50	FQYX4	34.00	34.00
	Per Mi.-Over 0 to 8	3LBXA	1.00	0.85
	Per Mi.-Over 8 to 25	3LBXB	1.10	1.00
	Per Mi.-Over 25 to 50	3LBXC	1.45	1.05
	Per Mi.-Over 50	3LBXD	1.45	1.15

Private Line Transport Mileage Prices

	ELEMENT	USOC	PRESENT PRICE	PROPOSED PRICE
AP3 OR AP 33	Fixed-Over 0 to 8	FQYX1	51.00	51.00
	Fixed-Over 8 to 25	FQYX2	51.00	51.00
	Fixed-Over 25 to 50	FQYX3	51.00	51.00
	Fixed-Over 50	FQYX4	51.00	51.00
	Per Mi.-Over 0 to 8	3LBXA	1.00	0.85
	Per Mi.-Over 8 to 25	3LBXB	1.10	1.00
	Per Mi.-Over 25 to 50	3LBXC	1.45	1.05
	Per Mi.-Over 50	3LBXD	1.45	1.15
AP4 OR AP 34	Fixed-Over 0 to 8	FQYX1	112.00	110.00
	Fixed-Over 8 to 25	FQYX2	112.00	110.00
	Fixed-Over 25 to 50	FQYX3	112.00	110.00
	Fixed-Over 50	FQYX4	112.00	110.00
	Per Mi.-Over 0 to 8	3LBXA	1.00	0.85
	Per Mi.-Over 8 to 25	3LBXB	1.10	1.00
	Per Mi.-Over 25 to 50	3LBXC	1.45	1.05
	Per Mi.-Over 50	3LBXD	1.45	1.15

Private Line Optional Feature Function Prices

ELEMENT/SERVICE		USOC	PRESENT PRICE	PROPOSED PRICE
LOW SPEED DATA				
	MCCULLOH BRIDGING	B5NHF	3.80	3.80
	TELEGRAPH BRIDGING			
	0 TO 75 BAUD	B5NJF	4.60	22.00
	0 TO 150 BAUD	B5NKF	47.00	60.00
	DIRECT BRIDGING	BMW	2.85	2.85
VOICE GRADE				
	RESISTIVE BRIDGING			
	TWO-WIRE	B5NA2	7.48	6.00
	FOUR-WIRE	B5NA4	8.95	7.00
	BRIDGE LIFTER	BLBV2	1.00	2.00
	SPLIT FREQ BRDGNG			
	TWO-WIRE	B5NVB	3.60	7.50
	FOUR-WIRE	B5NVC	12.20	9.25
	PASSIVE BRIDGING	B5NVP	5.25	6.25
	SUMMATION BRIDGING	B5NVS	5.85	8.25
CONDITIONING, PER NAC				
END LINK - MID LINK				
	C CONDITIONING	X1CPT	8.90	8.50
	DATA CAPABILITY	XDCPT	1.00	1.00
	IMPROVED ATTENUATION DISTORTION	UHW	0.40	0.50
	IMPROVED ENVELOPE DELAY DISTORTION	UHY	23.20	15.00

Private Line Optional Feature Function Prices

END-TO-END				
	C1	O1B	8.90	5.00
	C2	O2B	17.17	5.00
	C4	O4B	51.52	10.00
	D1	O1D	17.17	5.00
DATA ENHANCEMENT		3BE	2.00	2.00
EFFECTIVE 4 WIRE		HBD	18.60	12.00
EQ LVL PATH LOSS		CRP	5.80	5.00
IMPROVED RETURN LOSS		1QA2W	12.90	9.00
IMPROVED TERMINATION		CP6	4.70	4.25
DSAS	2-WIRE BRIDGING	DSK	6.40	7.00
	4-WIRE BRIDGING	DSP	15.10	15.00
AUDIO SERVICE				
	AUDIO BRIDGING			
	AP1/31	BCNPT	4.00	6.00
	AP2/32	BCNPT	5.20	6.00
	AP3/33	BCNPT	22.80	6.00
	AP4/34	BCNPT	14.85	12.00

Private Line Nonrecurring Prices

	USOC	PRESENT PRICE	PROPOSED PRICE
LOW SPEED DATA:			
SERVICE PROVISIONING			
INITIAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00
CHANNEL PERFORMANCE (END LINK/MID LINK)			
LS1 - Same Wire Center	PCW3X	80.00	75.00
LS2 - Same Wire Center	PCW4X	82.00	75.00
MT3	PJWAX	79.00	75.00
TG1	PCW5X	84.00	75.00
TG2	PCW6X	83.00	75.00
CHANNEL PERFORMANCE (END TO END)			
LS31 CONTROL- Same Wire Ctr	PCWSX	80.00	75.00
LS31 MCCULLOH- Same Wire Ctr	PCWTX	80.00	75.00
LS31 DC CHANNEL	PCWWX	79.00	75.00
LS31 TELEGRAPH			
0 - 75 BAUD	PCWUX	83.00	75.00
0 - 150 BAUD	PCWVX	88.00	75.00
VOICE GRADE			
SERVICE PROVISIONING			
INITIAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00
CHANNEL PERFORMANCE (END LINK/MID LINK)			
VG1			
NO SIGNALING	PCWEX	82.00	80.00
LOOP START	PCWYX	90.00	80.00
GROUND START	PCWJX	91.00	80.00
VG2			
NO SIGNALING	PCWEX	80.00	80.00
LOOP START - LA	PCWAX	92.00	80.00
- LB	PCWBX	94.00	80.00
- LC	PCWCX	94.00	80.00
-LO	PJWCX	91.00	80.00
- LS	PJWHX	91.00	80.00
SF SIGNALING	PCWZX	93.00	80.00

	USOC	PRESENT PRICE	PROPOSED PRICE
MANUAL RINGDOWN	PCWFX	98.00	80.00
AUTO RINGDOWN	PCWGX	94.00	80.00
CODE-SELECT	PCWHX	98.00	80.00
VG3			
NO SIGNALING	PCWEX	77.00	80.00
LOOP START	PCWYX	91.00	80.00
GROUND START	PCWJX	91.00	80.00
E&M SIGNALING	PCWKX	95.00	80.00
SF SIGNALING	PCWZX	93.00	80.00
REVERSE BATTERY SIGNALLING	PCW1X	101.00	80.00
DUPLEX SIGNALLING - DX	PJWOX	90.00	80.00
DUPLEX SIGNALLING - DY	PJWPX	90.00	80.00
VG5			
NO SIGNALING	PCWEX	76.00	80.00
DATA STREAM	PCWLX	102.00	90.00
VG6			
NO SIGNALING	PCWEX	80.00	80.00
DATA STREAM	PCWLX	97.00	90.00
VG7			
NO SIGNALING	PCWEX	77.00	75.00
LOOP START - LA	PCWAX	91.00	80.00
- LB	PCWBX	91.00	80.00
- LC	PCWCX	91.00	80.00
-LO	PJWCX	92.00	80.00
- LS	PJWHX	94.00	80.00
GROUND START	PCWJX	90.00	80.00
E&M SIGNALING	PCWKX	97.00	80.00
SF SIGNALING	PCWZX	93.00	80.00
DUPLEX SIGNALLING - DX	PJWOX	90.00	80.00
DUPLEX SIGNALLING - DY	PJWPX	90.00	80.00
VG-8			
LOOP START	PCWYX	95.00	80.00
E&M SIGNALING	PCWKX	92.00	80.00
SF SIGNALING	PCWZX	92.00	80.00
VG-9			
NO SIGNALING	PCWEX	78.00	75.00
E&M SIGNALING	PCWKX	96.00	80.00
SF SIGNALING	PCWZX	92.00	80.00

	USOC	PRESENT PRICE	PROPOSED PRICE
VG-10			
NO SIGNALING	PCWEX	75.00	75.00
DATA STREAM	PCWLX	100.00	95.00
VG-12			
DATA STREAM	PCWLX	96.00	95.00
CHANNEL PERFORMANCE (END TO END)			
VOICE GRADE BASIC			
NO SIGNALING	PCWEX	50.00	50.00
VG32			
NO SIGNALING	PCWEX	77.00	65.00
LOOP START - LA	PCWAX	90.00	70.00
- LB	PCWBX	90.00	70.00
- LC	PCWCX	90.00	70.00
- LG	PCW8X	91.00	70.00
- LO	PJWCX	92.00	70.00
- LS	PJWHX	91.00	70.00
MANUAL RINGDOWN	PCWFX	89.00	70.00
AUTO RINGDOWN	PCWGX	94.00	70.00
CODE-SELECT	PCWHX	90.00	70.00
VG33			
NO SIGNALING	PCWEX	76.00	65.00
E & M	PCWKX	93.00	80.00
REVERSE BATTERY	PCW1X	98.00	80.00
VG36			
DATA STREAM	PCWLX	96.00	90.00
DATAPHONE SELECT-A-STATION (DSAS)			
SERVICE PROVISIONING			
INITITAL	SCH	261.00	305.00
CHANNEL PERFORMANCE	PJW7X	77.00	80.00
AUDIO			
SERVICE PROVISIONING			
INITITAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00

	USOC	PRESENT PRICE	PROPOSED PRICE
CHANNEL PERFORMANCE (END LINK/MID LINK)			
AP-1 (3.5 KHZ)	PJW1X	90.00	85.00
AP-2 (5.0KHZ)	PJW2X	90.00	85.00
AP-3 (8.0 KHZ)	PJW3X	90.00	85.00
AP-4 (15.0KHZ)	PJWBX	90.00	85.00
CHANNEL PERFORMANCE (END-END)			
AP31 (3.0 KHZ)	PCWNX	90.00	85.00
AP 32 (5.0 KHZ)	PCWOX	90.00	85.00
AP 33 (8.0 KHZ)	PCWQX	90.00	85.00
AP34 (15.0 KHZ)	PJW5X	90.00	85.00
EXCHANGE SERVICE EXTENSIONS (ESE)			
SERVICE PROVISIONING			
INITIAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00
CHANNEL PERFORMANCE	PJWGX	50.00	45.00
FOREIGN EXCHANGE (FX) AND FOREIGN CENTRAL OFFICE (FCO)			
SERVICE PROVISIONING			
INITIAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00
CHANNEL PERFORMANCE			
FX LOOP START	PJWEX	97.00	80.00
FX GROUND START	PJWKX	97.00	80.00
FX REV BATTERY	PJWLX	102.00	80.00
FCO LOOP START	PJWFX	97.00	80.00
FCO GROUND START	PJWMX	97.00	80.00
FCO REV BATTERY	PJWZX	102.00	80.00
TELEPHONE ANSWERING SERVICE (TAS)			
SERVICE PROVISIONING			
INITIAL	SCH	261.00	305.00
SUBSEQUENT	SCHAX	136.00	165.00
CHANNEL PERFORMANCE	PJWJX	76.00	75.00
TRANSPORT MILEAGE (ALL SERVICES)			

	USOC	PRESENT PRICE	PROPOSED PRICE
MILE BAND OVER 0-8	FQYX1	51.00	70.00
MILE BAND OVER 8-25	FQYX2	51.00	70.00
MILE BAND OVER 25-50	FQYX3	51.00	70.00
MILE BAND OVER OVER 50	FQYX4	51.00	70.00
OPTIONAL FEATURES			
LOW SPEED DATA			
BRIDGING			
MCCULLOH	B5NHF	2.15	5.00
TELEGRAPH 75 BAUD	B5NJF	4.32	8.00
150 BAUD	B5NKF	6.15	9.00
DIRECT	BMW		3.00
VOICE			
BRIDGING			
RESISTIVE 2-WIRE	B5NA2	8.50	8.00
RESISTIVE 4-WIRE	B5NA4	7.00	9.00
SPLIT FREQUENCY 2-WIRE	B5NVB	5.00	6.75
SPLIT FREQUENCY 4-WIRE	B5NVC	4.00	5.50
PASSIVE	B5NVP	5.00	6.50
SUMMATION	B5NVS	2.75	5.00
BRIDGE LIFTER	BLBV2	3.50	5.50
TRANSFER ARRANGEMENT 2-WIRE	USY2X	5.00	5.00
TRANSFER ARRANGEMENT 4-WIRE	USY4X	7.00	8.00
AUDIO BRIDGING			
AP1/AP31	BCNPT	4.00	5.50
AP2/AP32	BCNPT	4.00	5.50
AP3/AP33	BCNPT	4.00	5.50
AP4/AP34	BCNPT	4.00	5.50
CONDITIONING			
TYPE C	X1CPT	20.00	22.50
TYPE D	XDCPT	19.00	22.50
C1	O1B	20.00	22.50
C2	O2B	20.00	22.50
C4	O4B	20.00	22.50

	USOC	PRESENT PRICE	PROPOSED PRICE
D1	O1D	19.00	22.50
IMPROVED ATTENUATION DISTORTION	UHW	17.00	10.00
IMPROVED ENVELOPE DELAY DISTORTION	UHY	16.00	10.00
DATA ENHANCEMENT	3BE	19.00	22.50
EFFECTIVE 4 WIRE	HBD	13.00	8.00
EQUAL LVL ECHO PAT LOSS	CRP	12.00	8.00
IMPROVED RET LOSS	1QA2W	12.00	8.00
IMPROVED TERMINATION	CP6	12.00	8.00
DATA CHAN TERM EQPT			
CO POWERED	LBA	61.00	61.00
CUST POWERED	LBD	61.00	61.00
DATAPHONE SELECT-A-STATION (DSAS)			
BRIDGING			
PORT TERMINATION 2-WIRE	DSK	4.00	10.00
PORT TERMINATION 4-WIRE	DSP	4.00	10.00
MISCELLANEOUS NONRECURRING CHARGES			
DESIGN CHANGE CHARGE	H28	63.00	70.00
ADDITIONAL ENGINEERING PER 1/2 HR.			
BASIC	AEQXX	23.00	30.00
OVERTIME	AEQOX	29.00	40.00
ADDITIONAL LABOR AT INSTAL. PER 1/2 HR.			
OVERTIME	ALFOX	6.00	9.00
PREMIUM	ALFPX	11.00	17.00
ADDITIONAL LABOR OTHER PER. PER 1/2 HR.			
BASIC TIME	ALGXX	19.00	28.00
OVERTIME	ALGOX	24.00	36.00
PREMIUM TIME	ALGPX	29.00	45.00

Digital Data Service Prices

ELEMENT	USOC	PRESENT PRICE	PROPOSED PRICE
RECURRING:			
NETWORK ACCESS CHANNEL (NAC)			
DDS (4-WIRE)	1DC4X	31.50	56.00
CHANNEL PERFORMANCE			
(END-LINK/MID-LINK)			
2.4 kbit/s	PJWQX	46.00	35.00
4.8 kbit/s	PJWRX	46.00	35.00
9.6 kbit/s	PJWSX	62.00	45.00
19.2 kbit/s	PMW7X	71.00	50.00
56 kbit/s	PJWTX	80.00	55.00
64 kbit/s	PM2LX	80.00	55.00
(END-TO-END)			
2.4 kbit/s	PJWUX	46.00	35.00
4.8 kbit/s	PJWVX	46.00	35.00
9.6 kbit/s	PJWWX	62.00	45.00
19.2 kbit/s	PMW8X	71.00	50.00
56 kbit/s	PJWYX	80.00	55.00
64 kbit/s	PM2KX	80.00	55.00
CHANNEL PERFORMANCE SUBTOTAL			
TRANSPORT MILEAGE			
PRESENT:			
FIXED-LESS THAN 1 MILE			
2.4 kbit/s	XUQ1X	15.00	
4.8 kbit/s	XUQ1X	20.00	
9.6 kbit/s	XUQ1X	30.00	
19.2 kbit/s	XUQ1X	40.00	
56 kbit/s	XUQ1X	45.00	
64 kbit/s	XUQ1X	50.00	
FIXED-1 THRU 25 MILES			

Digital Data Service Prices

ELEMENT		USOC	PRESENT PRICE	PROPOSED PRICE
	2.4 kbit/s	XUQ2X	55.00	
	4.8 kbit/s	XUQ2X	55.00	
	9.6 kbit/s	XUQ2X	65.00	
	19.2 kbit/s	XUQ2X	90.00	
	56 kbit/s	XUQ2X	110.00	
	64 kbit/s	XUQ2X	110.00	
FIXED-OVER 25 MILES				
	2.4 kbit/s	XUQ3X	60.00	
	4.8 kbit/s	XUQ3X	60.00	
	9.6 kbit/s	XUQ3X	80.00	
	19.2 kbit/s	XUQ3X	100.00	
	56 kbit/s	XUQ3X	110.00	
	64 kbit/s	XUQ3X	120.00	
PER MI-1 THRU 25 MILES				
	2.4 kbit/s	1LN42	0.78	
	4.8 kbit/s	1LN42	1.11	
	9.6 kbit/s	1LN42	1.20	
	19.2 kbit/s	1LN42	1.20	
	56 kbit/s	1LN42	1.20	
	64 kbit/s	1LN42	1.20	
PER MI-OVER 25 MILES				
	2.4 kbit/s	1LN43	0.95	
	4.8 kbit/s	1LN43	0.95	
	9.6 kbit/s	1LN43	0.95	
	19.2 kbit/s	1LN43	0.95	
	56 kbit/s	1LN43	0.95	
	64 kbit/s	1LN43	0.95	
PROPOSED, ALL SPEEDS (QUANTITIES DIVIDED AMONG PROPOSED MILEAGE BANDS)				
FIXED-OVER 0 TO 8 MILES		FQYX1		60.00

Digital Data Service Prices

ELEMENT	USOC	PRESENT PRICE	PROPOSED PRICE
FIXED-OVER 8 TO 25 MILES	FQYX2		60.00
FIXED-OVER 25 TO 50 MILES	FQYX3		60.00
FIXED-OVER 50 MILES	FQYX4		60.00
PER MILE-OVER 0 TO 8 MILES	3LBXA		1.00
PER MILE-OVER 8 TO 25 MILES	3LBXB		1.00
PER MILE-OVER 25 TO 50 MILES	3LBXC		1.00
PER MILE-OVER 50 MILES	3LBXD		1.00
		TRANSPORT MILEAGE SUBT	
		SUBTOTAL RECURRING	
NONRECURRING:			
SERVICE PROVISIONING			
INITIAL	SCH		240.00
SUBSEQUENT	SCHAX		170.00
CHANNEL PERFORMANCE	PJWWX	370.50	105.00
	PMW8X	370.50	105.00
	PJWYX	370.50	105.00
	PJWWX	345.50	105.00
	PJWYX	345.50	105.00
		SUBTOTAL NONRECURRING	

PRICING CHANGES FOR COCOT CUSTOMERS BEING CONVERTED TO PAL SERVICE

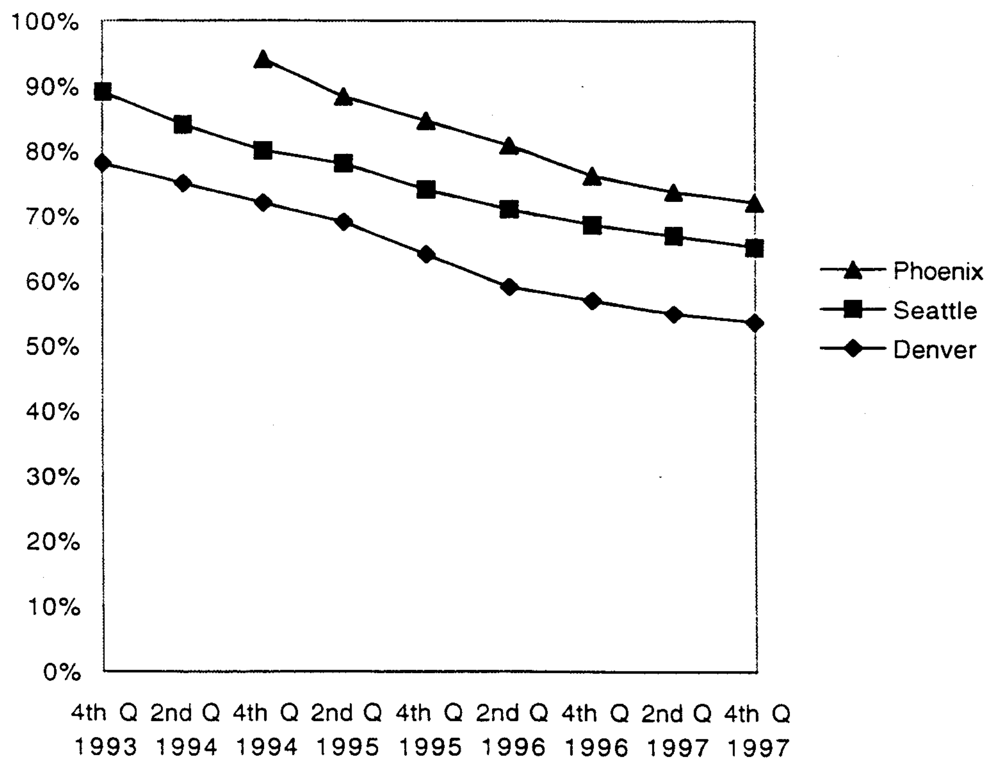
CURRENT SERVICE AND PRICE		SERVICE AND PRICE AFTER CONVERSION	
Measured Guestline	$19.35	Measured Guestline	$19.66
Measured Full Resale	$16.85	Measured Full Resale	$17.16
Measured Full Resale with Fraud Protection	$19.35	Measured Full Resale with Fraud Protection	$19.66
Flat Guestline	$54.75	Flat Guestline	$44.81
Flat Full Resale	$53.25	Flat Full Resale	$42.31
Flat Full Resale with Fraud Protection	$55.75	Flat Full Resale with Fraud Protection	$44.81

MEASURED USAGE

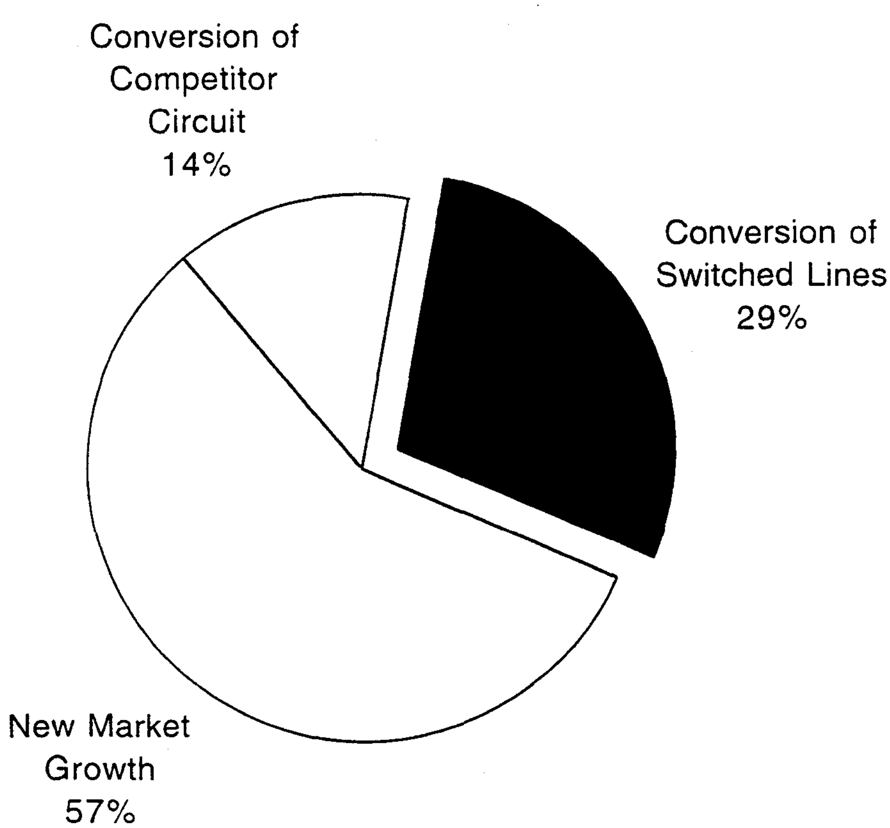
• Intra Wire Center – Band A $0.03 (initial min)/$0.01 (add. min)	$0.05 (initial min)/$0.015 (add. min)
• Inter Wire Center 0 to 25 miles – Band B $0.05 (initial min)/$0.015 (add. min)	$0.05 (initial min)/$0.015 (add. min)
• Inter Wire Center 25 to 55 miles – Band C $0.06 (initial min)/$0.02 (add. min)	$0.05 (initial min)/$0.015 (add. min)

Arizona Corporation Commission
U S WEST Communications BMW-13
Exhibits of Barbara M. Wilcox
Page 1 of 1, January 8, 1999

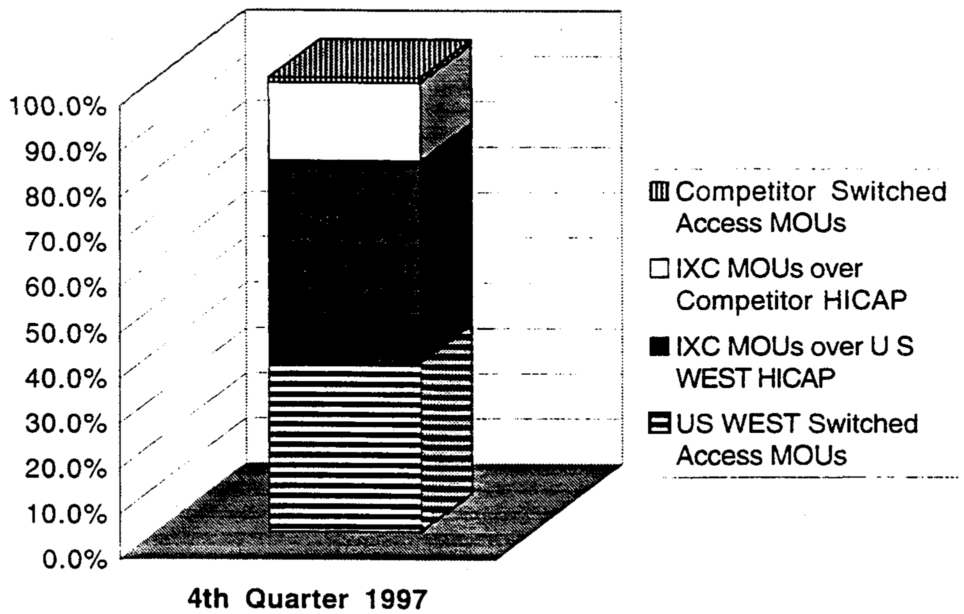
U S WEST Market Share for High Capacity Private Line Services Provided to End Users



Sources of Growth for End User High Capacity Private Line Services in Phoenix



Long Distance Minutes of Use in Phoenix



DAVID L. TEITZEL

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

DAVID L. TEITZEL

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

1. Current Responsibilities: My current responsibilities include advocating the strategic initiatives of U S WEST's marketing organizations before state regulatory commissions throughout the 14-state U S WEST region. I am also responsible for providing expert testimony to support these marketing initiatives.

2. Purpose of Testimony: This testimony supports pricing initiatives for Residence and Business Basic Exchange, Market Expansion Line, IntraLATA Long Distance, Directory Assistance, Complete-A-Call, Listings, Custom Calling, SingleNumber^{sm} Service, and Screening Services included as part of U S WEST's application for a general rate case. In addition, I am proposing that the Commission extend pricing flexibility to U S WEST in the form of competitive zones, expedited competitive classification of new services, and greater promotional flexibility. Such actions will allow U S WEST to compete on equal terms with its competitors and will establish a framework in which competition will thrive.

3. Summary of Testimony: The telecommunications landscape in Arizona is changing rapidly. To date, a total of 35 companies have filed applications with the Arizona Corporation Commission for classification as Competitive Local Exchange Carriers (CLECs). In addition, U S WEST has obtained approval for contracts with 50 companies in Arizona to interconnect with U S WEST's facilities and/or resell its services. Clearly, the intent of Congress in enacting the Telecommunications Act of 1996 is being fulfilled in the state. Competitive impacts are being felt in all U S WEST product lines, but a major competitive focus has been upon the business market in the Phoenix and Tucson metropolitan areas. My testimony includes an exhibit which demonstrates the significant proportion of business customers that are within 1,000 feet of existing competitive fiber facilities, including fiber belonging to such major carriers as AT&T/TCG, MCI WorldCom, Electric Lightwave, GST and e.spire. These customers are subject to active and aggressive marketing by these competitors. In addition, competition in the residence market is

escalating throughout the greater Phoenix area as Cox makes its digital telephony service available to an increasing number of consumers.

My testimony identifies specific wire centers in the Phoenix and Tucson areas in which facilities-based competition currently exists. The presence of significant competition in these wire centers qualifies them, under Article 11, R-14-2-1108 of the Commission Rules, for "competitive" classification. U S WEST proposes that these wire centers be classified as "competitive zones," in which services provided to customers within these wire centers are subject to relaxed regulation. Although I am initially proposing competitive zone classification for specific wire centers within the Phoenix and Tucson metropolitan areas, I am also defining a mechanism to designate additional wire centers as competitive zones as competitors expand their offerings into other areas of the state. U S WEST's competitive zone proposal will establish a level of regulatory oversight consistent with that of its competitors. Specific price ceilings will be established for services offered within competitive zones, below which U S WEST will be free to adjust prices as the market dictates. In addition, U S WEST will be able to promote services and offer packages to similarly-situated customers within the zone at prices that may vary from prices in effect in other zones or areas of the state.

Additionally, I propose that all new services introduced in Arizona be automatically classified as "competitive" upon their introduction. By definition, new services will be optional and discretionary when they are introduced, and the market will govern their acceptance. Automatic competitive classification for new U S WEST services will place U S WEST on competitive par with other telecommunications providers in Arizona.

Finally, I propose that U S WEST be granted the same ability to promote its products and services as that afforded its competitors. Currently, U S WEST is required to file tariffs with the Commission outlining the details of any promotion with a value of $25.00 or more. The tariffs are required to be on file with the Commission at least 30 days prior to the advent of the promotion.

U S WEST proposes that this requirement be modified to mirror the promotional capabilities of other competitive providers.

The rate of growth of competition in Arizona creates a need for U S WEST to rebalance prices and refine the structure of its services to position them properly in the marketplace. My testimony outlines proposals which will appropriately rebalance rates, reduce traditional cross-service subsidies and move residential local exchange service rates toward cost-recovery levels. Specific pricing proposals are outlined in detail in Section II of my testimony. The overall annual revenue impact of these changes is $67,980,566.

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is David L. Teitzel. I am employed by U S WEST Communications, Inc. (U S WEST) as Director-Product and Market Issues. My business address is 1600 7th Avenue, Room 2904, Seattle, WA, 98191.

Q. BRIEFLY OUTLINE YOUR EMPLOYMENT BACKGROUND.

A. I began my career with U S WEST's predecessor company, Pacific Northwest Bell, in 1974. I have held a number of management positions in various departments, including Regulatory Affairs, Network, and Marketing. As a Marketing product manager, I was responsible for product management of Basic Exchange, Centrex, and IntraLATA Long Distance services. I have also served as a Market Manager for U S WEST Dex. I was named to the Director - Product and Market Issues position in March 1998.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a Bachelor of Science degree from Washington State University in 1974.

Q. HAVE YOU TESTIFIED IN ARIZONA PREVIOUSLY?

A. No, I have not. I have, however, testified as an expert witness in state regulatory dockets in Iowa, Washington, Oregon, Minnesota, New Mexico, North Dakota, South Dakota, Utah, and Wyoming.

Q. ON WHAT BASIS IS U S WEST ADVANCING ITS PROPOSALS?

A. Competition in local telecommunications markets is a key issue facing U S WEST and this Commission. While the telecommunications environment has changed dramatically, and customers have an increasing number of choices, U S WEST remains largely regulated as a traditional utility. Competition creates a need for a shift in the regulatory paradigm.

To meet customers' evolving telecommunications needs in a timely way, it is especially important that U S WEST and this Commission redefine U S WEST's regulatory relationship with the state. The old regulatory model no longer works. A new model must be established.

I. COMPETITION

Q. HOW DOES THE TRADITIONAL FORM OF REGULATION HINDER COMPETITION?

A. This can best be demonstrated by contrasting competitive, unregulated businesses and U S WEST:

- Competitive businesses pick their customers and set their own prices.[1] U S WEST is required to serve all customers at regulated prices, while facing the risk that excess capacity will be found not "used and useful" and excluded from the rate base.

- Competitive businesses price to particular markets in a way that reflects the variation in the customers' perception of value and the cost of serving different customers. U S WEST must continue to charge average prices that often carry higher margins, regardless of the actual costs, in order to permit residential prices to remain low.

- Competitive businesses choose the level of service they will offer on the basis of cost/benefit trade-offs and analyses of the service their competitors offer customers. Competitors have no standards that are enforced and are not required to report service quality results to the Commission. U S WEST is subject to a detailed service quality tariff and reporting requirements are rigidly enforced.

- Competitive businesses compete in the marketplace, while U S WEST is often required to fight its battles with competitors in front of regulators. In the interest of maintaining maximum flexibility for themselves, U S WEST's competitors argue for extensive regulatory burdens on U S WEST that are typically not required of the competitors, preventing the benefits of true competition from flowing to the customer.

- Competitive businesses introduce new services and price initiatives without advance notice and then aggressively promote them. U S WEST must often disclose its

[1] As evidenced by tariffs on file with the Arizona Commission, many alternative telecommunications companies have chosen only to serve business customers at this time.

marketing initiatives to regulators and competitors in advance, giving competitors substantial lead time to develop and implement reactive strategies.

- While competitive businesses aggressively promote their brands, the cost of brand advertising by U S WEST has been typically disallowed from recovery through rate payers.[2]

In short, competitive businesses make their own operating decisions, make their own investment decisions, and set their prices as a matter of management judgement in recognition of competitive market forces. U S WEST, in stark contrast, continues to have many of its choices made by regulators.

Q. IS U S WEST CURRENTLY EXPERIENCING COMPETITION IN ARIZONA?

A. Yes, there is substantial competition today in Arizona and the pace is escalating. Arizona is one of the most rapidly growing areas in the United States. Analysts project that the Phoenix area alone will sustain an annual increase of over 50,000 people for the next 15 years. As a result of the robust economy, Phoenix is currently one of the most competitive telecommunications markets in the U S WEST region. U S WEST faces intense competition from both resellers and established facilities-based competitors with substantial resources and extensive networks. These established companies, which include the combined AT&T/TCG and MCI WorldCom companies, have access to financial resources greater than U S WEST's with which to fund expansion of their networks. Today's competitive networks transmit voice and data traffic for a variety of services, over switched and dedicated facilities.[3]

Q. WHAT IMPACT HAS THE TELECOMMUNICATIONS ACT OF 1996 HAD ON COMPETITION IN ARIZONA?

A. Congress passed into law the Telecommunications Act of 1996 which put in place a philosophy to open all telecommunications markets to all providers. Since that time, the Ariz ona Corporation Commission (ACC) has received applications from over sixty-five

[2] The Commission, in Arizona Docket No. E-1051-93-183, Decision No. 58927, Page 31, 1/3/95, disallowed $478,441 in legislative, public relations and advertising expense.
[3] Cox's telephone service will be available over the company's cable television lines, enabling customers to receive television, telephone and Internet services from the same source. Arizona Republic, 11/19/98, Page A20.

companies to be classified as Competitive Local Exchange Carriers (CLECs). (See Exhibit DLT-1, List of Companies with CLEC and ILEC Applications, as maintained by the Arizona Corporation Commission Utilities Division). U S WEST has signed contracts with 50 companies which have been approved, allowing for interconnection with U S WEST facilities and/or resale of U S WEST products and services in Arizona. Competitors range from powerful international companies with substantial resources, to small innovative companies striving to take advantage of the exploding telecommunications market. Even cable and electric companies have emerged as alternative providers of telecommunications services for Arizona consumers.

Q. WHICH OF U S WEST'S MARKETS ARE MOST VULNERABLE?

A. U S WEST's high revenue business customer base is the most vulnerable, as these customers often can be reached by competitors with a minimal level of investment. Approximately (redacted)% of U S WEST's business access lines in Arizona are concentrated in the Phoenix/Tucson areas. (See Proprietary Exhibit DLT-2 for figure.) Proprietary Exhibit DLT-3 contains maps of the Phoenix and Tucson areas with business locations plotted on them. The maps also highlight a 1000' zone surrounding competitive fiber. (Redacted)% of business access lines in the Phoenix area and (redacted)% of business access lines in the Tucson area fall within this 1000' zone, making these customers extremely vulnerable to competition. (See Proprietary Exhibit DLT-2 for figures.) With prices for these customers continuing to carry high levels of contribution, competitors have focused on these businesses for quick competitive entry.

Q. SHOULD THIS BE A CONCERN OF THIS COMMISSION?

A. Yes. The public interest is not served by keeping U S WEST's hands tied while its competitors win its best customers. In fact, quite the opposite is true. When it loses high revenue customers, U S WEST must recover its costs over a smaller customer base. As the rate of loss grows, and support from high margin services is no longer available, rate increases become inevitable. If this Commission will allow U S WEST to compete on equal footing with its competitors, it will have the opportunity to retain some proportion of those high revenue customers. The result will be to mitigate the need for rate increases, especially in the residential market.

Q. ARE THE LOSSES LIMITED TO BUSINESS CUSTOMERS?

A. No. U S WEST is also experiencing losses of residential customers. While most competitors have primarily been targeting business customers to this point, other competitors such as Cox are beginning to target residence customers. On November 18, 1998, the Phoenix City Council granted Cox a license to begin providing residential telephone service in the area. According to a Cox representative, "more than half of Cox's 220,000 cable customers in Phoenix will have the upgraded components (necessary to provide digital telephone service) by June 30, 1999." Cox is already providing residential telephone service to over 5,000 residents of Chandler, with the potential to serve 40,000 additional subscribers there and plans to ultimately offer telephone service to all of its 600,000 subscribers in Phoenix and surrounding communities.[4] Cox's efforts illustrate that the residential market is not immune to competition.

Q. HAVE THE LOSSES OCCURRED THROUGHOUT THE STATE OR HAVE THEY BEEN CONCENTRATED IN SPECIFIC GEOGRAPHIC AREAS?

A. U S WEST's competitive losses have primarily occurred in the greater Phoenix and Tucson areas. While competitors' facilities once focused exclusively on the central business districts in Phoenix and Tucson, investments in network build-outs over the last 24 months have resulted in facilities that reach the most remote suburbs of these two cities.

Q. WHY IS THE COMPETITION FOCUSING ON THESE PARTICULAR AREAS OF THE STATE?

A. These areas represent (redacted)% of total U S WEST access lines and (redacted)% of total U S WEST revenue in Arizona (See Proprietary Exhibit DLT-2 for figures). As indicated above, alternative providers in these areas can easily target a high number of customers with minimal investment, thereby maximizing their competitive impact.

Q. HOW ARE ALTERNATIVE TELECOMMUNICATIONS PROVIDERS APPROACHING COMPETITION IN ARIZONA?

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[4] The Arizona Republic, November 19, 1998, Page A1.

A. U S WEST's primary competition comes in the form of facilities-based providers who initially target densely concentrated, high revenue business customers. Competitors may win all of a customer's telecommunications business immediately, or, they may make gradual inroads by first handling only a portion of the business' traffic, e.g., long distance or data. Once a relationship is established, the competitor can easily capture all of the customer's business by offering further incentives such as low prices and one-stop shopping convenience. While U S WEST's competitors can offer complete, integrated packages, U S WEST remains at a competitive disadvantage by not being able to compete in the interLATA long distance market. Once facilities are in place in a given area, there is very little incremental cost for the competitor to expand their service to other business and residence customers, especially as fiber is placed in suburban areas to reach business complexes located outside central downtown business corridors. U S WEST is experiencing erosion of its customer base in this manner today.

In addition to facilities-based providers, U S WEST is also facing other forms of significant competition. I will discuss this in more detail below, specifically relating to the Phoenix and Tucson areas.

A. COMPETITIVE LANDSCAPE - PHOENIX

In Phoenix, U S WEST's primary competitors include AT&T/TCG, MCI WorldCom, Electric Lightwave Inc. (ELI), GST, and Cox. Following is a brief description of the competitive impact each of these companies is having on the telecommunications market in Phoenix:[5]

AT&T/TCG

AT&T's $11.3 billion takeover of Teleport Communications Group (TCG) was approved by the FCC on July 23, 1998, providing it with easy, rapid access to the facilities-based local exchange and high capacity markets in Phoenix and other major urban centers across the nation. Before the merger, TCG was majority owned by three cable companies – TCI, Comcast, and Cox. AT&T's purchase may be seen as a stepping stone to its entry into cable-provided local telephony. AT&T, commenting on the merger, said that it will enable it to sell all-in-one packages of local, long distance and data communications to

[5] This information was obtained from various sources, including the Internet, magazine and newspaper articles, and studies of the Phoenix and Tucson markets performed by Quality Strategies.

businesses.[6] In a press release issued July 23, 1998, AT&T Chairman C. Michael Armstrong stated: "Completion of this merger accelerates our entry into the $21 billion business local service market because we're reducing our dependence on the Bell companies for direct connections to businesses. We're giving customers simplicity, convenience, and choice. It's one-stop shopping for local and long distance services, just for starters."[7]

AT&T's merger with TCG provides it with access to TCG's 300 route miles of fiber in Phoenix (the largest CLEC fiber network in Arizona) which is currently connecting approximately 150 single and multi-tenant buildings. The vast majority of these buildings are located in Phoenix and Tempe. TCG's network is composed of 11 self-healing SONET (synchronous optical network) rings and is capable of providing facilities-based service to the majority of the Phoenix Metropolitan Statistical Area's (MSA's) business-intensive localities. TCG offers facilities-based service in the following communities: Downtown Phoenix, Phoenix Sky Harbor International Airport, Chandler, Mesa, Tempe, Paradise Valley, Scottsdale, Tolleson, and Glendale.

In 1996, TCG was authorized by this Commission to offer local switched services in the Phoenix area. Traditionally, TCG has marketed integrated packages of telecommunications services to business and government customers, including local exchange services, high capacity services, and enhanced data products. The company primarily targets financial services firms, media, health care companies and government facilities. To recoup network construction costs, TCG has relied on dedicated access revenues from large business customers. However, TCG has recently modified that strategy and attempted to move "down-market." This is largely the result of its local exchange product rollout and proliferation of high capacity use among smaller and medium-sized businesses.

The AT&T/TCG merger will allow the two companies to capitalize on the strengths of each. Traditionally, TCG has directed its marketing efforts toward the large business market, and rapidly accumulated a customer list laden with Fortune 500 companies. Conversely, AT&T's recent strengths have been the small business and consumer markets. With the merger, AT&T will be poised to reassert its influence among large business customers and TCG will expand its focus to include the small business market.

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[6] "AT&T's Teleport takeover OK'd," Arizona Republic, 7/24/98.
[7] http://www.tcg.com/tcg/media/PRcurrent/attfinal.html.

TCG will also acquire additional resources from the merger to allocate for network expansion in the Phoenix MSA. AT&T stands to benefit significantly from the merger in that it will undoubtedly lead to a reduction in operating costs via a reduction in the overall switched access costs it must pay U S WEST for its core business – long distance.

The press release announcing completion of the merger explains the companies' competitive strategy in more detail:

> TCG's services enhance AT&T's ability to provide integrated end-to-end services for large and small business customers. AT&T will offer single points of contact for local and long-distance services and customer care, enterprise solutions for businesses with multiple locations, volume discounts across services and an integrated bill for customers who want it. The company plans to roll out offers in 34 more markets this year; by early next year, AT&T plans to integrate local service into its business offers throughout 66 of TCG's markets.
>
> TCG's network infrastructure also helps the company add toll-free calling capabilities to AT&T Digital Link, a local service for businesses with dedicated digital connections to the AT&T network. Introduced as an outbound local service in 49 states last year, the service now also lets customers in California, Texas, New York, New Jersey, Florida, Georgia and Connecticut receive incoming calls using their existing phone numbers. AT&T plans to add inbound local calling in five more states this year and more in 1999.[8]

Exhibit DLT-4 is a copy of a TCG web page, describing AT&T/TCG switched service offerings, all of which can be considered direct competitive alternatives for U S WEST services. For example, with TCG's PrimePath^{sm} Service, customers can connect to TCG's fiber using their Prime Business Lines or Prime Business PBX trunks. PrimePath customers may also obtain enhanced features such as Call Waiting, Call Forwarding, Conference Calling, and Voice Mail.[9] TCG's web page touts that their customers can save, on average, 10% over what they were paying to "the traditional phone company." As they state: "Competition does amazing things to prices. We should know. We're the

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[8] http://www.tcg.com/tcg/media/Prcurrent/attfinal.html
[9] http://www.tcg.com/tcg/products/factSheets/PrimePath.html.

competition."[10] TCG's Arizona tariffs specify recurring rates that are discounted for multi-year contracts. Exhibit DLT-5 is a price quote AT&T recently sent to a U S WEST business customer located in Phoenix, comparing AT&T's rates to U S WEST's rates for such a contract. TCG's tariffs also allow for pricing on an individual case basis for "special situations."

In June of this year, AT&T announced another record-breaking deal, this one with TCI. If approved, this deal will allow AT&T to provision entertainment, high speed internet access, and telephone service to millions of homes across America.

MCI WorldCom

In September, 1998, the FCC granted approval for a $37 billion merger between WorldCom and MCI. WorldCom had previously acquired Brooks Fiber in 1997, adding 44 local facilities-based networks to its portfolio. Phoenix FiberLink, Metro Access Networks, Compuserve, and ANS are also part of the MCI WorldCom family. WorldCom, commenting on the merger, stated that their primary strategy revolves around business customers. "John Sidgmore, vice chairman of World Com Inc., said in a telephone interview that the residential customers likely would be transferred to other long distance companies, potentially including the regional Bell companies...'We're not saying (the end of residential service) is definitely going to happen on day one,' Sidgmore said. Initially, we're going to market to consumers just like MCI does. On the other hand, our strategy is not in the consumer business.'"[11] In January 1998, MCI declared that it was backing away from serving the residential market. "MCI announced that it was abandoning local residential service provision until – reincarnated as a unit of WorldCom – it could construct its own network facilities, perhaps during 1999. For now, the company's president announced, MCI would proceed 'with the only business case that makes sense' – furnishing local service to corporate customers."[12]

In Phoenix, WorldCom's network has been operational since 1995 when it initiated service to several large end users and every major carrier in the central business district. Since then, the network has expanded to encompass a much broader geographic area. In 1997, WorldCom installed a central office switch in Phoenix that will allow it to diversify its product offering with the rollout of local exchange services. Currently, there are over

[10] http://www.tcg.com/tcg/products/productsSvcPrice.html.
[11] "WorldCom Would Shift MCI's Focus," by Mike Mills, Washington Post, October 3, 1997, Page A01.
[12] Telecommunications Reports Daily, "MCI to Abandon Residential Local Service," January 22, 1998. Reported in "Bad Deal of the Century" by Dan Schiller of the Economic Policy Institute.

50 single and multi-tenant buildings connected to WorldCom's 75 mile fiber network in the Phoenix MSA, with the majority clustered downtown and along Camelback Road. Geographic areas currently covered by WorldCom fiber in the greater Phoenix area include: Downtown Phoenix, Camelback Road/Indian School road areas between Central Avenue and 46th Street, Lincoln Road, Phoenix Sky Harbor International Airport, Van Buren Street, and Tempe. WorldCom has a "Resold Local Exchange Service" tariff on file with the Commission, which allows them to provision a full range of products and services to end user customers in the Phoenix area not served directly by their existing fiber facilities.

MCI has built a small fiber network (20-40 miles) in Phoenix's central business district to transmit voice and data traffic. In contrast with several other competitors, MCI has not invested heavily in fiber facilities to serve end users on the city's periphery or in the suburbs. Instead, it has limited the scope of its network to the city's downtown area and connected the buildings that house its largest long distance accounts (to provide facilities-based high capacity service). MCI also provides services through resale to customers outside the scope of their existing physical network.

Traditionally, MCI has targeted the large business segment for voice and data services (long distance, high capacity, data, and local exchange). In Phoenix, MCI is the primary long distance carrier for several Fortune 500 companies—a sales channel that it frequently uses to win high capacity and local exchange accounts.

Electric Lightwave, Inc.

Having turned up its network in 1994, ELI was one of the first providers of competitive telecommunications services in the greater Phoenix area, originally providing alternatives to interexchange carriers for U S WEST's switched access and private line services. Like MCI and WorldCom, ELI originally limited the scope of its network to Phoenix's central business district. However, it decided to expand its network as the suburban demand for communications services increased. In 1997, ELI entered into a strategic alliance with the Salt River Project (SRP). Under the terms of the agreement, ELI leases substantial amounts of SRP dark fiber. The combined ELI-SRP network now encompasses over 400 route miles and is capable of delivering facilities-based service to Phoenix, Tempe, Scottsdale, Chandler, and Gilbert, among others. ELI has 30 to 45 buildings on its network. ELI also claims to have invested $37 million in new facilities in Phoenix.[13] Far

[13] http://www.eli.net/phxswitch.html.

from being a start-up, ELI is a subsidiary of Citizens Utilities Company, a large utility company and full-service telecommunications provider.[14]

ELI has recently increased marketing campaigns directed toward Internet Service Providers (ISPs). One of its primary overall strategies is to establish several communications networks in the western United States and become a regional provider of communications services. At present, ELI operates competitive facilities in eighty-four cities, enabling ELI to effectively market service to businesses operating in one or more of these markets. It is a full service provider (offering integrated communications service packages including local service, switched and dedicated long distance, private networks, advanced data and Internet access services, nationwide videoconferencing, and prepaid services) to customers in Phoenix, Boise, Salt Lake City, Sacramento, Portland, Spokane, and Seattle. Additionally, ELI has established long-haul links between many of its markets and leases capacity to ISPs and other carriers.

Exhibit DLT-6 is an advertisement ELI recently ran in the Arizona Business Magazine, encouraging customers to move their local telephone service to Electric Lightwave.[15] Tariffs on file with the Commission provide for initial and maximum rates for Business Local Exchange Service, with discounted rates specified for customers signing 2-year, 3-year, and 5-year contracts.

GST

GST has approximately 300 route miles of fiber in Arizona, including more than 11 miles of fiber in downtown Phoenix and a long haul fiber link between Phoenix and Tucson. GST has been certified by the Commission to provide facilities-based and resold telecommunications services and has connected 15 to 25 buildings to its network. In the first quarter of 1998, GST acquired a long distance company, Call America Phoenix, to boost corporate revenues.[16] GST serves residence and business customers in Phoenix, providing local dial tone, long distance, private line, Centrex, internet, and data transport services.[17] Exhibit DLT-7 is a copy of a GST ad that appeared in the July 10, 1998 edition of "The Business Journal," highlighting GST's product line.

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[14] http://www.czn.net/AnnualReports/1997. Citizens Utilities had revenues of $1.4 billion in 1997, an increase of 8% over 1996.

[15] Arizona Business Magazine, November/December 1998.

[16] http://www.gstcorp.com/press/gen86.html.

[17] http://www.gstcorp.com/local/mesa.html.

Cox

Cox Communications is perhaps the most diversified of U S WEST's competitors, currently offering customers integrated packages of television, local and long distance telephone service, and internet services. Cox is also the first facilities-based competitor to offer telephone service to residence customers on a wide geographic basis. Exhibit DLT-8 includes copies of direct mail advertisements sent to Phoenix customers, highlighting Cox's offerings. Cox has reportedly undertaken a $500 million cable infrastructure project in Phoenix, and is in the process of building seven operation centers to support its 8,900-mile fiber network.[18] Cox entered the telecommunications market focusing on multiple dwelling units. However, they have recently expanded their offerings to the single family residential market.

On September 10, 1998, Cox announced that they will begin offering local telephone service to its cable TV customers for $11.75/month. Exhibit DLT-9 includes excerpts from the tariff Cox has on file with the Commission. Note that for residence combination service (cable TV and telephone), Cox is offering a <u>second line for $6.50/month</u>. Features and voice mail are also available at prices below U S WEST's rates. The tariff also allows Cox the permanent flexibility to waive initial service connection charges for residential customers and to run promotions at their discretion without Commission approval.[19]

Other Competitors

Resellers are competing with U S WEST in both the residential and business markets in Phoenix. Many of the CLECs who utilize fiber facilities to serve customers also resell U S WEST services. Residential resellers have primarily focused on multiple dwelling units as their target market. Telephone Plus, Cable Plus, and One Point are examples of such resellers. Proprietary Exhibit DLT-10 is a map showing the location of residential apartment buildings in the Phoenix area which are now being served by a alternative telecommunications providers. Combined, these buildings represent over 2,300 units that are served by alternative providers. NextLink is an example of a competitor who has employed this same strategy for business complexes in the Phoenix area. Resellers offer customers rates that are lower than U S WEST's, as they are able to purchase U S WEST residential services at a 12% discount and most business services at an 18% discount from retail rates.

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[18] The Business Journal, 3/17/97.

Another competitive means of providing telecommunication services is that used by WinStar Communications. WinStar's system removes the necessity for the local wireline loop, totally bypassing the U S WEST network. They can extend service from a carrier's Point of Presence to customer locations entirely through fixed wireless facilities. WinStar has been certified by this commission as a Competitive Local Exchange Carrier and is actively marketing its services in Arizona. On October 27, 1998, WinStar announced that it will provide free local telephone service (up to $1,000 per month) until the year 2000 to certain customers who sign 3 year contracts with the company. Customers who participate will receive long distance service at $.09/minute. Although this offer is not currently available to customers in Arizona according to WinStar's Internet Home Page, it demonstrates the increasing competition afforded by this technology, as the offer comes on the heels of an announcement from Teligent, another fixed wireless competitor, to begin offering service in 10 U. S. markets.

According to an October 27, 1998 Press Release, Teligent will offer customers who commit to switching their existing service (local service, or local service in some combination with long distance or Internet) a 30% discount from the rates they are currently paying for such services. (Customers must sign at least a one year contract.) The Press Release states, "Teligent can deliver these substantial savings to customers because it is creating its own digital networks to deliver local service to its customers. These networks give the company a substantially lower cost structure than the traditional local telephone companies, or other competitors that use the existing local networks."[20] Information obtained from Teligent's Web site indicates they will soon be offering service in Phoenix and Tucson.

TCG is also a carrier licensed to provide service through fixed wireless loop technology. Phoenix, with its relatively flat terrain, is an ideal environment for utilization of wireless fiber which relies on direct line of sight for successful transmission.

B. COMPETITIVE LANDSCAPE - TUCSON

[19] Arizona SCC Tariff No. 1, Second Revised Page No. 60, Effective 11-4-98; Original page 69, Effective 11/30/97.

[20] http://www.teligentinc.com/templates/temp_pressrel.asp?content_id=165.

In Tucson, U S WEST's primary competitors are Brooks, GST, and e.spire. Following is a brief description of these companies' impact on the Tucson telecommunications market[21]:

Brooks

Brooks Fiber completed its initial fiber buildout in Tucson in early 1996. For the first several months of operation, Brooks offered dedicated access, enhanced data services, and point-to-point connections used by carriers and other customers to bypass U S WEST's switched access services. Brooks entered the local exchange market on a resale basis during the second quarter 1996. Subsequently, Brooks has migrated to a mixture of provisioned service and resale. Over the past year, Brooks has diversified its product offering to include switched voice and data products in addition to traditional high capacity services. Brooks has been routing traffic via its own central office switch since the second quarter 1997. Brooks' network in the greater Tucson area surrounds the central business district, covering an area stretching 10 miles in all directions from the center of the city. Brooks' metropolitan area network consists of several SONET rings and connects over forty buildings in the greater Tucson area, including several multi-tenant buildings in addition to some single-tenant edifices. The vast majority of served buildings are located within the city limits of Tucson. Brooks' stated goal for the Tucson market is to gain significant market share by offering an integrated package of local exchange services in addition to data services, connectivity, and internet access.

GST

In November, 1997, GST completed construction of long-haul facilities in Arizona to connect its Phoenix fiber network with its Tucson-area network. GST established operations in Tucson in 1994 with the completion of its 70 route mile network in the central business district and a few nearby suburbs. GST now operates more than 250 route miles of fiber across the southern part of Arizona. The long haul facilities connecting Phoenix and Tucson comprise over 110 route miles. GST began offering service to Tucson-area businesses in November 1997. Like several other CLECs, GST's focus is on becoming a provider of integrated telecommunications services. GST's local switched product offering is similar to U S WEST's. GST offers its customers basic business lines, Centrex-like service, trunks, and ISDN lines. Before the rollout of local switched services, GST was strictly a provider of dedicated services designed to allow customers to bypass the U S WEST network, including point to point connections, special

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[21] This information was obtained from various sources, including the Internet, magazine and newspaper articles, and studies of the Phoenix and Tucson markets performed by Quality Strategies.

access, and data services. GST has installed fiber beneath the following streets in Tucson: Country Club Road, Speedway Boulevard, Broadway Boulevard, 18th Street, and 6th Street.

e.spire

e.spire (formerly ACSI) completed construction of its original network serving Tucson's central business district in the first quarter of 1996. The Tucson network was one of e.spire's first networks and is thus one of its most mature. Although its network was originally constructed in 1996, it did not roll out local switched services until the first quarter 1997. Although the original network consisted of just a few miles in downtown Tucson, e.spire's network has grown to its present size of nearly 120 route miles of optical fiber.

e.spire's Internet Web page provides more specific information on the location of e.spire's network expansion, citing a 29-mile northwest expansion completed in October 1996 in the northwest business corridor along Interstate 10; a 73-mile expansion completed in May 1996 which proceeds eastward from downtown along Grant and Broadway south to Rita Road to serve potential customers like Keane, IBM, and Hughes, through the Airport Authority complex, serving Intuit, UPS, and Butterfield Business Park, and installation of a Lucent 5ESS switch which, according to the Web page, was scheduled for completion in second quarter 1997.[22]

In Tucson, e.spire's local service product line is similar to that of U S WEST's, including basic lines, features, a Centrex-type service, and PBX trunks. Additionally, e.spire offers a robust package of high capacity and data services including DS-1 and DS-3 special access circuits, optical-speed circuits, frame relay, Ethernet, etc. Before the rollout of local switched services, e.spire had generated revenues by offering private line and data services to large businesses in the greater Tucson area and by offering alternatives to U S WEST's local exchange service to major interexchange carriers. e.spire was the first facilities-based CLEC to offer local services to the business community of Tucson. e.spire's web page touts their ability to offer a solutions package to meet all of a customer's telecommunications needs: "Our first-hand experience in the market tells us that businesses don't have time to deal with different providers for local dial tone and long

[22] http://www2.espire.net/networks/nxx_look2.cfm?MainCity_ID=33.

distance. They need a provider that offers creative alternatives that can "do it all," offering the simplicity and convenience of a single point of contact and one bill."[23]

Q. HAS U S WEST BEEN ABLE TO DETERMINE THE LOCATION OF THESE COMPETITORS' FACILITIES IN RELATIONSHIP TO U S WEST'S PHOENIX AND TUCSON WIRE CENTERS?

A. Yes. Exhibit DLT-11 shows the presence of these competitors' facilities in U S WEST service areas in Phoenix and Tucson, based on the above-referenced information and other competitive intelligence. Cox's facilities are not shown on Exhibit DLT-11; however, the area where Cox is currently offering telephone service is highlighted in green on the exhibit.

Q. ARE THE PROVIDERS MENTIONED ABOVE A COMPLETE REPRESENTATION OF THE ALTERNATIVES AVAILABLE TO PHOENIX AND TUCSON CUSTOMERS?

A. No. There are a number of additional providers that I have not specifically mentioned. For example, I am attaching pages from the Phoenix and Tucson 1998 U S WEST Dex Yellow Pages as Exhibit DLT-12. This exhibit demonstrates that there are 78 telecommunications companies other than U S WEST available to Phoenix customers and 7 such companies available to Tucson customers. While some of these companies may focus on a single market such as paging or long distance, many of them offer a full menu of telecommunications products and services from which customers may choose. It is abundantly apparent that broad-scale local competition can no longer be treated as a future possibility. It is here now and is growing rapidly.

C. REGULATORY FLEXIBILITY

Q. DOES U S WEST HAVE THE ABILITY TO EFFECTIVELY COMPETE UNDER THE EXISTING REGULATORY FRAMEWORK?

A. No, it does not. With the exception of the few services which have already been classified as competitive, U S WEST is obligated to charge state-wide rates for its products and services. State-wide rates are developed based on costs for the entire state, including high-cost rural areas. Competitors, on the other hand, are focusing solely on large metro

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[23] http://www2.espire.net/products/voice.

areas of the state (Phoenix and Tucson) where they can maximize their investment by reaching a high volume of customers in a concentrated area. As the incumbent local exchange carrier, U S WEST doesn't have the ability to "pick and choose" its customers and service area. To successfully compete, U S WEST must have the ability to manage and price its services in a flexible manner in areas where competition exists. To this end, I recommend the Commission take three significant actions: 1) Establish specific geographical areas as "competitive zones," 2) Classify new services as "competitive" upon introduction, and 3) Allow U S WEST to promote its products and services with as much flexibility as its competitors enjoy. I address each of these recommendations in more detail below.

Q. HAS THE COMMISSION PREVIOUSLY ESTABLISHED A MECHANISM TO BE USED IN RESPONDING TO COMPETITION IN ARIZONA?

A. Yes. Article 11, R-14-2-1108 of the Commission Rules specifies the procedures to be followed if a telecommunications company or the Commission believes a service should be classified as competitive. Petitioning parties are required to submit documentation in support of their contention that the service should be classified as competitive, including the number of alternative providers of the service, identification of the alternative providers, information on the ability of alternative providers to furnish substitutable services at competitive rates, terms, and conditions, and other indicators of market power. If the Commission finds that a service *is* competitive, the rules provide for streamlined regulation of that service.

D. COMPETITIVE ZONES

Q. PLEASE DESCRIBE YOUR PROPOSAL TO DESIGNATE CERTAIN GEOGRAPHICAL AREAS AS COMPETITIVE ZONES.

A. U S WEST is proposing that the Commission, in recognition of the increasingly competitive telecommunications environment, classify specific wire centers as competitive zones. The wire centers will be those in which competitive alternatives to U S WEST services exist. Within such zones, U S WEST will be able to meet customer needs and respond to competition with relaxed regulatory oversight. Initially, I am proposing that competitive zones be established in the Phoenix and Tucson areas, but I also suggest a mechanism to designate additional wire centers as competition extends throughout the state.

Q. WHAT CRITERIA ARE YOU PROPOSING MUST BE MET BEFORE A WIRE CENTER CAN BE DESIGNATED AS A COMPETITIVE ZONE?

A. Before a competitive zone can be established, at least one of the following criteria must be met: 1) A competitor has facilities in place and is marketing or offering services in competition with U S WEST; 2) A reseller is marketing or offering services in competition with U S WEST; or 3) A competitor is marketing or offering services through the provision of unbundled network elements purchased from U S WEST.

Q. WHAT FLEXIBILITY WILL COMPETITIVE ZONES PROVIDE FOR U S WEST?

A. Within each zone, maximum rates will be established for each service, below which U S WEST may change prices without Commission approval. Maximum rates will equate to a doubling of the price of the service in effect at the time this rate case is concluded, except for residence Basic Exchange Service. Residence Basic Exchange Service will have a maximum rate of $19.00 established within each competitive zone.

Within the parameters established by the maximum price levels, U S WEST will be able to:

- Change prices, terms, and conditions for services upon concurrent, written notice of the change to the Commission. Formal Commission approval is not required. Prices will apply to all similarly-situated customers within the zone.
- Implement promotional offerings/discounts on services. This will encompass limited duration as well as permanent programs designed to attract customers or increase customer awareness of a particular offering.
- Offer incentives designed to attract and/or retain customers. Similarly-situated customers will receive comparable offers. Such offers will be available to anyone within the competitive zone.
- Package, bundle, and/or price services on a customer-specific basis. Similarly-situated customers will receive comparable offers. Such offers will be available to anyone within the competitive zone.

Offerings and prices may vary between competitive zones. With this flexibility, U S WEST will be able to effectively respond to customer and market demands in the areas subject to competition.

Q. IS THE FLEXIBILITY YOU ARE PROPOSING TO HAVE IN THE COMPETITIVE ZONES ANY DIFFERENT THAN THE FLEXIBILITY ENJOYED BY YOUR COMPETITORS OPERATING IN THOSE SAME AREAS?

A. No. U S WEST's competitors enjoy the flexibility of being able to price under maximum rates, run promotions and waive charges according to market needs, and design offerings to meet specific customer demands. However, even with the flexibility to be gained by the competitive zone concept, U S WEST remains at a distinct disadvantage as long as our competitors are able to offer an integrated package of interLATA and intraLATA long distance services. Until U S WEST is allowed into the interLATA long distance market, its competitors will continue to attract customers who are looking for a single provider to meet all of their telecommunications needs.

Q. WHAT SERVICES WILL BE IMPACTED BY APPROVAL OF COMPETITIVE ZONES?

A. Once an area is designated as a competitive zone, all services offered by U S WEST will be afforded the flexibility outlined above. Some services have already been deemed "competitive" on a state-wide basis by this Commission (i.e., Private Line, MTS, WATS, Centrex, and National DA). They will continue to have state-wide flexibility and will also be eligible for any further flexibility afforded by the competitive zone concept.

Q. WILL RESIDENCE AND BUSINESS SERVICES BE AFFORDED PRICING FLEXIBILITY IN EVERY COMPETITIVE ZONE?

A. Not necessarily. It will depend on the competition that exists in the competitive zone. If the only competition in a particular area is for business customers, then the flexibility associated with that competitive zone will only be applicable to business-type services. Similarly, if competitors are only serving residence customers in a specific area, U S WEST's competitive response within the competitive zone will be limited to residence services. Of course, it is very likely there will be competition for both residence and business customers in a certain competitive zone, in which case all of U S WEST's product family will be afforded flexibility.

Q. WILL THERE BE ANY RESTRICTIONS ON HOW U S WEST MAY PRICE SERVICES WITHIN THE COMPETITIVE ZONES?

A. Yes. U S WEST will not be able to price in a manner that will result in a price squeeze. The price floor for all services will be TSLRIC, with the exception of residence Basic Exchange Service. Prices for specific services may be offered below Total Service Long Run Incremental Cost (TSLRIC) in competitive zones only as long as the total revenue for the customer or group of customers is above TSLRIC. Only regulated costs will be used to make this determination. In addition, the maximum price establishes a price ceiling for services within competitive zones. The price ceilings will be double the rates approved in this filing; or for services not treated in this rate case, double the existing rates, except for residence Basic Exchange Service. Residence Basic Exchange Service will have a maximum rate of $19.00 established within competitive zones. In the case of services already classified as "competitive" on a state-wide basis, the maximum rates will also apply outside of the competitive zones. U S WEST will not price above these price ceilings. U S WEST will only be able to change ceiling prices in the future upon Commission approval on an expedited schedule consistent with R14.2.1110. Exhibit DLT-13 provides an example of the price ceiling concept.

Q. WHAT CONTROLS REMAIN ON U S WEST WITHIN A COMPETITIVE ZONE?

A. U S WEST remains under the jurisdiction of the Arizona Corporation Commission. Prices and terms/conditions for services offered within competitive zones will be subject to the complaint process, whereby the remedy for any customer or agency believing prices or terms to be unjustified is to file a written complaint with the Commission.

Q. WHAT SPECIFIC AREAS ARE YOU PROPOSING BECOME COMPETITIVE ZONES?

A. I am recommending that those wire centers currently experiencing competition per the criteria described earlier in my testimony be classified as competitive zones. Specifically, I am recommending that the following wire centers be designated as competitive zones:

<u>Business Competitive Zones – Phoenix</u>

Bethany-West, Cactus, Chandler South, Coldwater, Deer Valley North, Foothills, Ft. McDowell, Gilbert, Glendale, Greenway, Higley, Laveen, Maryvale, Mesa, Pecos, Peoria, Phoenix East, Phoenix Main, Phoenix North, Phoenix Northeast, Phoenix Northwest, Phoenix South, Phoenix Southeast, Phoenix West, Queen Creek, Scottsdale Main, Shea, Sunnyslope, Super Main, Super West, Tempe, Thunderbird, Tolleson

Residence/Business Competive Zones – Phoenix

Chandler-Main, Chandler-West, McClintock

Business Competitive Zones – Tucson

Cortaro, Craycroft, Flowing Wells, Marana Main, Rincon, Tucson-East, Tucson-Main, Tucson-North, Tucson-South, Tucson-Southeast, Vail-South.

Exhibit DLT-11 highlights the proposed competitive zones.

Q. **YOU MENTIONED PREVIOUSLY THAT THE COMMISSION CURRENTLY HAS A PROCESS IN PLACE TO PROVIDE PRICING FLEXIBILITY FOR SERVICES THAT ARE DETERMINED TO BE COMPETITIVE. WHY, THEN, ARE COMPETITIVE ZONES NECESSARY?**

A. U S WEST is requesting the flexibility that competitive zones will provide to be able to respond to competitors' offerings. At the time the existing competitive rules were developed, competition was just emerging. Local competition wasn't even a reality. Existing rules do not reflect the course that competition has taken in the state. It is not occurring state-wide. Rather, it is occurring within specific geographic areas of the state (Phoenix and Tucson). U S WEST needs the flexibility to compete with all of its products where the competition is.

Furthermore, current rules allow U S WEST pricing flexibility on a product-specific basis. However, competitors are not limiting their offerings to a single product. As I indicated earlier, competitors are approaching customers with packaged offerings, integrating voice, data, internet, wireless, and in some instances, cable TV services. To be successful and retain customers, U S WEST must be able to respond in kind, to the fullest extent possible under the law. U S WEST cannot compete with only a handfull of "competitive" products when our competitors have the flexibility to address a customer's entire telecommunications portfolio.

Another reason that the existing system is not conducive to attracting and retaining customers in a competitive environment is the amount of time it takes to achieve competitive status for a product within the regulatory process. For example, it took five months for National Directory Assistance and eleven months for Centrex to be classified as competitive services. It's been 17 months since U S WEST filed its petition to have ATM services declared competitive and the request is still pending. Meanwhile, competitors continue to make inroads into the market.

The existing service-oriented approach to pricing flexibility, while helpful in the past, is incompatible with today's competitive environment. A reasonable solution is to establish competitive zones which will give U S WEST immediate pricing flexibility, on a limited geographic basis, that it needs to be able to compete on a more equal basis with competitors operating within those same limited geographic areas.

Q. DON'T YOU ALSO HAVE A NEED TO RESPOND IN A COMPETITIVE MANNER OUTSIDE OF THE PHOENIX AND TUCSON AREAS?

A. At the present, competition is not as prevalent in other areas of the state; therefore, existing contracting capability affords U S WEST the flexibility it needs to respond with unique, customer-specific pricing proposals in these other areas. However, as competition develops in other areas of the state, establishment of additional competitive zones will be appropriate.

Q. WHAT CRITERIA ARE YOU PROPOSING MUST BE MET BEFORE ADDITIONAL COMPETITIVE ZONES ARE ESTABLISHED?

A. The same criteria used to establish competitive zones in the Phoenix and Tucson areas should be used to establish additional competitive zones. Those criteria are described above.

Q. WHAT PROCESS DO YOU PROPOSE BE FOLLOWED BY THIS COMMISSION TO ESTABLISH ADDITIONAL COMPETITIVE ZONES IN THE FUTURE?

A. I recommend that competitive zones be established upon notification to the Commission that the above-referenced criteria have been met. The Commission will respond to the notification within a pre-determined timeframe, which I recommend be 15 days. If the

Commission does not object to the proposal, formal approval is not required. The area will automatically become a competitive zone after the 15-day clock expires. If objections are raised, or additional information is required, the Commission shall issue a formal notice of such. The entire process should be considered within 60 days of notification.

E. NEW SERVICE INTRODUCTIONS

Q. ARE YOU RECOMMENDING REGULATORY RELIEF FOR NEW SERVICES AT THE TIME OF INTRODUCTION?

A. Yes. Currently, U S WEST must follow a two-step process to have new services classified as "competitive." Initially, the service is classified as fully regulated or non-competitive. A subsequent filing must then be made to have services classified as "competitive." As described elsewhere in this testimony, this process can take months or years to complete. I am proposing that a streamlined process be adopted whereby all new services will automatically be classified as "competitive" upon introduction. Maximum rates will be established at that time.

Q. WHY IS U S WEST MAKING THIS RECOMMENDATION?

A. U S WEST is making this recommendation in response to the competitive marketplace. When competitors roll out new initiatives to Arizona consumers, the services described in the tariffs they file are automatically classified as competitive. Competitors are not required to incur the time and expense of having their services reclassified. U S WEST is requesting that same flexibility. As new services are likely to be optional and discretionary, and competitive providers are prevalent, it is appropriate for the Commission to approve this recommendation.

Q. HAVE OTHER STATES RECOGNIZED THAT NEW SERVICES SHOULD BE CLASSIFIED AS COMPETITIVE?

A. Yes, many states in the U S WEST region allow for this type of flexibility. For example, the Price Regulation Plan recently adopted by the Iowa Utilities Board (Board) categorizes all new services as "Nonbasic Communications Services." Nonbasic Communications Services tariffs are filed with the Board and become effective within 15 days unless suspended or rejected by the Board. In Minnesota, when U S WEST first offers a service, a tariff or price list is filed with the Commission with the proposed classification for the service. New services classified as price-regulated may be offered to customers ten days after notice to the Commission. New services classified as flexibly priced or non-price regulated may be offered to customers one day after filing. If no interested party or the Commission objects to U S WEST's proposed classification within thirty days from the date of filing, the proposed classification is approved.[24] Legislation in Utah provides that an incumbent telephone company may offer any new service by means of a price list which will become effective five days after it is filed with the commission.[25] Idaho, Colorado, and Wyoming also allow regulatory flexibility for most new services.

Q. WILL APPROVING THIS RECOMMENDATION IN ARIZONA BE IN THE PUBLIC INTEREST?

A. Most definitely. It will mean that Arizona consumers will be able to benefit from new developments and new technologies in a much more rapid manner. It will also mean that U S WEST will be able to compete more equitably with other providers, which in turn will result in tangible consumer benefits such as more choices, better customer service, attractive pricing, and more innovation.

F. PROMOTIONS

Q. AT THE BEGINNING OF YOUR TESTIMONY, YOU INDICATED U S WEST IS PROPOSING ADDITIONAL FLEXIBILITY RELATIVE TO PROMOTIONS. PLEASE EXPLAIN.

A. Under existing tariff provisions, U S WEST has limited ability to promote its products. Promotions valued at more than $25.00 per customer must be filed with the Commission Staff thirty days prior to implementation. In addition, at the conclusion of each promotion, the Company is required to file results with the Commission Staff. U S WEST's competitors are not required to file promotion results, and are not required to file 30 days in advance for *any* promotion-regardless of the value to the customer. I am proposing that U S WEST be granted the same ability to promote its products as its competitors enjoy. The tariffs accompanying this filing contain revised promotional language, which mirrors the promotional tariff that Cox has on file with this Commission. A copy of Cox's

[24] Minnesota Stat. § 237.761, subd. 7.
[25] UCA §54-8b-2.3.

promotional tariff is attached as Exhibit DLT-14 to this testimony. Other competitors' promotional tariffs are also attached to the Exhibit.

Q. WHAT CONCLUSION CAN BE DRAWN ABOUT THIS PROPOSAL?

A. U S WEST is simply asking for comparable regulatory treatment as that already granted its competitors. Promotions are generally designed to increase customers' awareness of offerings or to attract new customers. The thirty day notice requirement currently imposed on U S WEST gives competitors an opportunity to develop a marketing response before U S WEST has had an opportunity to implement its promotion. Acceptance of my proposal is in the best interest of Arizona consumers, who will be able to realize benefits associated with promotions from U S WEST on a much more rapid basis.

II. PRICING PROPOSALS

Q. YOU INDICATED EARLIER IN YOUR TESTIMONY THAT ANOTHER ASPECT OF THIS FILING IS THE NEED TO REPRICE CERTAIN SERVICES. WHY IS THIS REPRICING NECESSARY?

A. It is necessary for the prices of U S WEST's service to more closely reflect the actual cost of providing the services. If they do not, competitive losses for our high margin services will be unnecessarily high and impacts on customers who do not have alternatives will be magnified. Moving services toward the actual cost of providing service will require the prices of some products such as long distance and switched access, which have traditionally carried high levels of contribution, to be decreased, and the price of other services, such as residential basic exchange, to be increased.

Q. PLEASE IDENTIFY THE CHANGES YOU ARE PROPOSING IN THIS FILING.

A. The services and proposed changes are:

1. Residence Basic Exchange Service
   a. First Line Recurring Rate – Increase
   b. Exchange Zone Increment Recurring Rates – Increase
   c. Low Use Option – Convert to Budget Measured Service
   d. Nonrecurring Charge - Decrease

e. Zone Connection Charge – Eliminate

f. Multi-Party Service – Eliminate for Residence and Business

g. Base Rate Areas – Expand Boundaries

2. Business Basic Exchange Service
   a. Bundle Dial Tone Line and Local Usage Components
   b. Measured Local Usage – Restructure
   c. Resale Line – Increase Monthly Rate
   d. Exchange Zone Increment Recurring Rates – Increase
   e. Zone Connection Charge – Eliminate
3. Market Expansion Line – Increase Monthly Rate
4. Long Distance Services
   a. MTS – Change Business, Residence, Miscellaneous Rates
   b. Speech and Hearing Impaired Discount – Increase Discount Amount
   c. Simple Value – Reduce Residence Rates
   d. Arizona Value Calling Plan – Grandfather and Reduce Rate
   e. Arizona Value Calling Plan II – Withdraw Plan
   f. Business Daytime Connection Plus – Reduce Rates
   g. Volume Discount Plan – Eliminate
   h. MetroPac – Grandfather
   i. Operator Surcharges – Increase Charges
5. Directory Assistance – Incorporate into National DA
6. Complete-A-Call – Incorporate into National DA
7. Listings
   a. Internet Listings – Increase Monthly Rate
   b. E-Mail Listings – Increase Monthly Rate
   c. Privacy Listings – Increase Monthly Rate
   d. Premium Listings – Increase Monthly Rate
8. Custom Calling Services
   a. Caller Identification-Name and Number - Increase Residence Monthly Rate
   b. Caller Identification-Number – Increase Residence Monthly Rate
   c. U S WEST Receptionist-Name and Number – Increase Residence Monthly Rate
   d. U S WEST Receptionist-Number – Increase Residence Monthly Rate
   e. Custom Calling Packages – Grandfather Business Custom Calling Packages
9. SingleNumber^{sm} Service – Grandfather Service
10. Screening Services
    a. CustomNet Service – Restructure, Reprice

b. Billed Number Screening – Introduce Charge

c. Toll Restriction – Reprice

d. ScoopLine Access Restriction - Eliminate

d. 900 Service Restriction – Introduce Charge

e. Blocking for 10XXX1+, 10XXX011+ - Increase Nonrecurring Charge and Monthly Rate

Exhibit DLT-15 displays an overview of the revenue impacts associated with my recommendations for each of these categories of services.[26]

Dr. Wilcox will explain the price changes for Switched Access and other finished wholesale services in her testimony.

Q. PLEASE EXPLAIN THE PROPOSED CHANGES FOR EACH SERVICE AND THE RATIONALE FOR THE CHANGES.

A. Certainly. I will begin with residence Basic Exchange Service.

A. RESIDENCE BASIC EXCHANGE SERVICE

Q. WHAT ARE THE PRICE CHANGES YOU ARE PROPOSING FOR RESIDENCE BASIC EXCHANGE SERVICE?

A. I am proposing to increase the monthly access line and exchange zone increment rates. I am also proposing to reduce the nonrecurring charge associated with installing a residential access line; convert customers on Low Use Option Service to a new Budget Measured Service offering; and eliminate the Zone Connection Charge and Multi-Party Service. I discuss each of these proposals in more detail below.

1. ACCESS LINE, EXCHANGE ZONE INCREMENT INCREASES

Q. SPECIFICALLY, WHAT ARE THE CHANGES YOU ARE PROPOSING FOR RESIDENTIAL ACCESS LINES?

[26] All rates and revenue impacts referred to in this testimony exclude the impact of the temporary surcharge applied to certain services as a result of Decision No. 60381. The surcharge is expected to expire in late 1999.

A. I am proposing that the rates for residential access lines be increased as follows:

Rate Element	Current Monthly Rate*	Proposed Monthly Rate**	Difference
Flat Rate Service			
Individual line	$13.18	$15.68	$2.50
2-Party line	$11.94	$14.44	$2.50
4-Party line	$10.70	$13.20	$2.50
Low Income Telephone Assistance Program			
Flat Individual Line	$8.05	$9.92	$1.87
2-Party Line	$7.12	$9.00	$1.88
4-Party Line	$6.20	$8.07	$1.87
Low Use Option	$4.58	$6.44	$1.86
Lifeline Assistance Program			
Flat Individual Line	$11.43	$13.93	$2.50
2-Party Line	$10.19	$12.69	$2.50
4-Party Line	$ 8.95	$11.45	$2.50
Low Use Option	$ 6.75	$ 9.25	$2.50

* Does not include temporary surcharge

** Final rates in effect after surcharge expires.

NOTE: Proposed multi-party rates are interim until multi-party customers are converted to single-line service at which time customers will be charged the appropriate single line service rate. Multi-Party Service is currently grandfathered to existing customers.

Q. ARE YOU PROPOSING TO INCREASE THE MONTHLY RATE FOR ADDITIONAL LINES?

A. No, I am not. U S WEST believes Arizona residential customers have an expectation that the purchase of multiple access lines should be priced in a manner reflecting perceived economies of scale. In fact, Cox is currently offering discounted pricing for additional residential lines to address this expectation. Additionally, the CALC charge for additional lines is currently $1.50 higher than the primary line, and will be increasing again in January of 1999.

Q. SPECIFICALLY, HOW IS COX PRICING THEIR RESIDENTIAL TELEPHONE SERVICE?

A. Cox offers its residence cable subscribers in Phoenix a rate of $11.75 for the first line and $6.50 for the second line.[27] This compares to U S WEST's proposed rates of $15.68 for the first line and $13.18 for each additional line. Cox augments its service by providing long distance services at $.10/minute for interstate and intrastate calling.[28]

Q. WHAT INCREASES ARE YOU PROPOSING FOR EXCHANGE ZONE INCREMENT RECURRING RATES?

A. I am proposing that the recurring rate for Zone 1 be increased from $1.00 to $2.00 and the Zone 2 recurring rate be increased from $3.00 to $5.00.

2. RATIONALE FOR PRICE INCREASES

Q. PLEASE EXPLAIN WHY THE PRICE INCREASES TO RESIDENCE BASIC EXCHANGE SERVICE ARE NECESSARY.

A. The increases are necessary to move the service towards cost recovery levels and minimize implicit subsidies.

Q. WHAT IS THE RELATIONSHIP OF THE CURRENT PRICE TO THE COST OF THIS SERVICE?

A. I have attached proprietary Exhibit DLT-16 which details the existing price and cost for the residential access line.

Q. WHY ARE THE CURRENT PRICES BELOW THEIR COST?

A. Over the years, universal service has been a key public policy goal of the Commission and U S WEST. It has long been thought that low residential service rates would help achieve this objective. The policy testimony of Mr. Wayne Allcott contains a comparison of current rates with rates in effect ten years ago.

Q. HOW DID THE COMMISSION ACCOMPLISH THE OBJECTIVE OF KEEPING RATES LOW?

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[27] Arizona SCC Tariff no. 1, Page No. 61, Effective 11-30-97.

[28] Direct mail advertisement sent to Phoenix residents.

A. Traditional rate of return regulation in a monopoly environment enabled the Commission to keep residential rates lower than their cost through reliance on significant contributions from other services such as long distance and carrier access. Historically, in a monopoly environment, residence service prices were kept low and the Company was given an opportunity to earn its overall authorized rate of return.

Q. ARE THERE ANY RECENT EXAMPLES OF THE COMMISSION CONTINUING THIS TYPE OF MONOPOLY PRICING?

A. Yes. In the rate case U S WEST filed in 1993 (Docket E-1051-93-183), the Commission failed to approve the full increase to residential rates that U S WEST had proposed. This determination contributed to keeping the price of this service well below its TSLRIC costs.

Q. RATES WERE KEPT LOW TO ACHIEVE SOCIAL OBJECTIVES, IS THAT CORRECT?

A. Yes, that is what has historically occurred.

Q. WHAT DO YOU BELIEVE SHOULD BE DONE TO REMEDY THIS PRICING ANOMALY?

A. It is important that the basic residential line cover its total costs and provide an appropriate contribution to the corporation's common costs. Based on the testimony of Jerrold Thompson, Cost Witness for U S WEST, it is evident that the current price of residential basic exchange service is significantly below this cost. (See proprietary Exhibit DLT-16.) By increasing the rate of the residential line, we begin to rectify this cost/pricing discrepancy which is not sustainable in today's competitive environment.

Q. HAVE ANY OTHER STATES ACKNOWLEDGED THIS NEED TO MOVE COSTS AND PRICES TOWARD CORRECT ALIGNMENT?

A. Yes. Several states have recently taken steps in this regard:

- The Oregon Commission has specifically held that each service's price must cover its TSLRIC cost. Order No. 96-118, Page 2:

> "It will be increasingly difficult to maintain policies which overprice certain services to perpetuate high levels of contribution to residential exchange service...Rates which reflect the incremental (or marginal) cost of service encourage better resource utilization by conveying accurate price signals to consumers of those services."

- The Wyoming legislature has mandated that each service cover its TSLRIC. As a first step in that transition, the residential access line rate was raised to $18.75 (excluding EAS and Carrier Access Line Charges (CALC) on January 1, 1997 and an additional increase is pending Commission approval.

- The Utah Public Service Commission issued a Report and Order in U S WEST's 1997 General Rate Case Proceeding authorizing several price changes, including an increase in the monthly rate for residential Basic Exchange Service and decreases in the prices for intraLATA Long Distance and Switched Access services. The Commission was following the Utah Legislature's direction in 1995 to remove subsidies from rates by bringing prices closer to the cost of service.

Q. HASN'T THE ARIZONA COMMISSION ALSO RECOGNIZED THE NEED TO PRICE SERVICES IN RELATIONSHIP TO THEIR COSTS?

A. Yes. Section R14-2-1109 of the Arizona Administrative Code indicates that the price of a competitive telecommunications service should not be less than the company's TSLRIC cost of providing the service. In addition, Section R14-2-1310 (B) requires incumbent local exchange carriers to price interconnection services at a level equivalent to their TSLRIC-derived costs.

Q. WHAT IS CAUSING THE HISTORICAL PRICE-COST RELATIONSHIP BETWEEN VARIOUS TELECOMMUNICATIONS PRODUCTS TO CHANGE?

A. Actions at both the federal and state levels are encouraging competition in all markets, including the local exchange market. Congress passed the federal Telecommunications Act of 1996 (Act) and this Commission conducted interconnection proceedings where prices and procedures were adopted to allow competitors access to the local exchange market in Arizona. The success of these initiatives is documented in the "Competition" section of this testimony. As a result, the entire telecommunications landscape is changing radically, and a key element of that change is the need to price services above their TSLRIC.

Q. HOW DOES THIS NEW COMPETITIVE LANDSCAPE AFFECT THE PRICING OF U S WEST SERVICES?

A. This landscape makes it imperative that the prices of U S WEST services cover cost, thereby creating an equitable base for competition.

Q. WHAT ARE THE RAMIFICATIONS OF THIS CHANGED ENVIRONMENT FOR CONSUMERS?

A. With alternative providers increasingly available, consumers will elect not to pay prices for services that have been inflated to pay part of the cost of residential Basic Exchange Service. Competitive Access Providers (CAPs) have capitalized on this fact in the carrier access arena for many years. As I explained previously in this testimony, the same situation is occurring in the business Basic Exchange market. As these competitive entries occur, there is significant erosion of the incumbent local exchange carrier's (ILEC) "traditional" ability to achieve greater contribution from some services (e.g., Long Distance and Switched Access) while supporting other services (e.g., residential Basic Exchange).

Therefore, as competition enters the local and long distance telecommunications markets, U S WEST must be entitled to respond by pricing all services in relationship to their appropriate costs. These changes in cost/price relationships then lessen the amount of the historically-based subsidy flow from high contribution services to below-cost residential Basic Exchange Service.

Q. HOW DOES THIS TYPE OF COMPETITIVE ENTRY IMPACT THE ARIZONA RESIDENTIAL CONSUMER?

A. As traditional support available from other products is quickly eroded, significant price increases on previously subsidized services are necessary if U S WEST is to remain financially viable.

Q. IS COST THE ONLY FACTOR TO BE CONSIDERED WHEN SETTING THE PRICE FOR A SERVICE?

A. No, the other factors to be considered are existing market conditions and customer needs.

Q. DOES REMOVAL OF IMPLICIT SUBSIDIES SEND THE CORRECT ECONOMIC SIGNALS TO POTENTIAL COMPETITORS?

A. Yes, it does, in that it will make it more feasible for others to realistically compete in the residential Basic Exchange market. As long as U S WEST's prices are significantly below their forward-looking costs, there is no incentive for the competitor to enter the market as there is little or no room for profits. Consequently, competitors have primarily focused on the business market in Arizona.

Q WHAT OTHER FACTORS SHOULD THE COMMISSION CONSIDER REGARDING ITS REVIEW OF RETAIL PRICING OF THE RESIDENTIAL LINE?

A. With passage of the Act, and this Commission's decision in Docket U S WEST-3021-96-448 et.al, a competitive telecommunications provider now has the ability to enter the local market either through the use of unbundled network elements (wholesale) or through the resale of an existing ILEC's services under the new provider's name (retail). (Of course, providers also have the ability to enter the market through provision of their own facilities.)

Q. HOW DOES THIS CHOICE OF MEANS OF ENTERING THE LOCAL MARKET AFFECT A COMPANY'S PRICING OF ITS RETAIL RESIDENTIAL ACCESS LINE?

A. Unless there is some type of logical relationship between the underlying prices for the unbundled network elements and the finished services (wholesale and retail), there is the potential for tariff shopping and rate arbitrage. It is imperative that this Commission understand the significant interrelationships which exist between the pricing of wholesale and retail services. It is also important for the Commission to understand that a resold retail product is comprised of all of the elements that are available on an unbundled basis, therefore, the underlying costs for either the network elements or the finished product would be very similar. Because of that, the retail price of each service must be supported by cost, but the relationship to its counterpart wholesale product must also be considered.

The same is true of the relationship of the retail services to the unbundled network elements.

Q. IS SUBSIDY-LADEN PRICING SUSTAINABLE INTO THE FUTURE?

A. No, it is not. As is discussed elsewhere in this testimony and in the testimony of Dr. Wilcox, prices for long distance and other services need to be restructured and reduced to meet competitive pressures. This reduction will remove some of the current subsidy which these services provide to residential Basic Exchange Service. If U S WEST does not take immediate steps to respond to competitive pressure, including the establishment of competitive zones and lowering of Long Distance prices, the Company will continue to lose a large portion of the revenue from these services. The high volume Long Distance users are lost, leaving the cost recovery burden on the high cost, low use customers. This means there will be a need for even greater future price increases to the residential customer, to offset losses of traditional subsidy flows and to afford U S WEST the opportunity to earn a reasonable return. It is imperative, therefore, that U S WEST take steps today to move residence rates towards self-sufficient levels while simultaneously acknowledging the increasingly competitive nature of long distance and access by reducing their rates.

Q. COULD FAILURE TO REPRICE CORRECTLY HAVE A NEGATIVE IMPACT ON REMAINING CUSTOMERS?

A. Definitely. If the reprice is not done correctly, U S WEST will lose the high volume, high margin customers to new entrants, leaving primarily the high cost, low margin residential customers. However, the network investment remains the same. Therefore, cost recovery must occur over an ever-diminishing body of customers. This will result in significantly higher prices for those remaining customers.

Q. ARE CUSTOMERS WILLING TO PURCHASE THEIR LOCAL SERVICE FROM AN ALTERNATIVE LOCAL EXCHANGE PROVIDER?

A. Yes. Resellers and other local exchange providers have the ability to bundle services and provide customers with one stop telecommunications shopping. Market research studies have indicated consumers' desire to have only one provider. For example, the J.D. Power and Associates 1998 Residential Wireline CSI Study found that the main reasons households would be willing to bundle services are: 1) convenience (75%), 2) receiving a single bill (60%), 3) having only one contact for questions/problems (40%), and 4) competitive/discount pricing (34%).

Q. DO MARKET-BASED PRICING PRINCIPLES PRESENT ANY LONG TERM BENEFITS FOR ARIZONA CUSTOMERS?

A. Yes, they do. A potential long-term benefit of competition will be a reduction in total rates and an increase in options available to customers. As products are priced more realistically in relation to cost, facilities-based service providers are encouraged to enter a given market area. As this occurs, the market as a whole becomes truly competitive. This means that not only will the number of services offered increase, but the basic line may have increased functionality. And even though the price for residential service will initially be increased, greater incentives will develop for other providers. The presence of multiple providers will lead eventually to attractive pricing and packaging. However, as long as any of our services remain priced artificially low or artificially high, sustainable competitive entry is adversely impacted, as are the benefits to Arizona consumers. When U S WEST's services are priced artificially high to provide subsidies, competitors can win customers by pricing just under the "umbrella" thus created, reaping artificially high margins without providing real competitive benefits to consumers. Cox's recurring prices for residential ancillary telephone services compared to U S WEST's current rates demonstrate this pricing relationship:

	Cox	U S WEST
Call Waiting	$ 4.00	$ 5.00
Voice Mail	$ 4.95	$ 6.95

3. CUSTOMER ASSISTANCE PROGRAMS

Q. WHAT ARE THE POTENTIAL IMPACTS OF YOUR PROPOSED RATE INCREASES ON THE TELEPHONE SUBSCRIBERSHIP LEVELS IN ARIZONA?

A. It is U S WEST's belief that there will be negligible, if any, impact. First, it must be realized that for the vast majority of Arizona customers, the rates U S WEST is proposing are still very affordable and are an excellent value. It is unreasonable to distort prices for all services to subsidize one service when the proposed rate for residential customers is affordable for most.

Q. ON WHAT BASIS DO YOU CONTEND THAT MOST CUSTOMERS CAN AFFORD TO PAY THE RATE YOU ARE PROPOSING IN THIS CASE?

A. Median household income in Arizona is $31,637. According to PNR and Associates Request III study, conducted in August 1997, the local telephone bill represents just 2.24% of income and 2.24% of expenses for Arizona consumers. Even with the small price increase proposed in this filing, local telephone service remains very affordable.

Q. DO NEW ENTRANTS IN THE LOCAL EXCHANGE MARKET HAVE TO KEEP THEIR RESIDENTIAL PRICES LOW TO COMPLY WITH REGULATORY MANDATES?

A. No. Competitors may use their discretion in pricing service for their customers, as long as their price is above TSLRIC. In other words, they have no obligation to maintain artificially low prices for their customers, nor any obligation to meet any needs identified by this Commission for subsidized residential rates. As a practical matter, however, the current below-cost prices for U S WEST's residential service means there is no market for residential service priced at a higher level than the subsidized U S WEST price. Competitors must therefore meet this price if they are to have any business.

Q. PLEASE EXPLAIN PROGRAMS IN EFFECT TODAY WHICH THE COMMISSION, THE FCC, AND U S WEST HAVE IMPLEMENTED IN ARIZONA TO HELP PROMOTE INCREASED SUBSCRIBERSHIP LEVELS.

A. First, there is the Low Income Telephone Assistance Program which provides qualifying low income senior citizens with a 17% discount and a $1.75 reduction on the monthly rate for residence Basic Exchange Service. In addition, the CALC is waived. Customers on this plan may also receive a 17% reduction on the Basic Exchange nonrecurring charge.

There is also a Telephone Assistance Program for the Medically Needy. This program provides a credit to qualifying customers to cover the monthly rate for residence Basic Exchange Service; it covers the Universal Service Fund Surcharge; and covers 50% of the nonrecurring charge to install a residential access line. Additionally, the federal plan provides a $3.50 credit to be applied to the CALC.

Additionally, the Lifeline Assistance Program is available for qualifying low-income subscribers. This program provides for a $1.75 reduction in customers' monthly local exchange bill and a waiver of the $3.50 CALC.

Finally, residents who qualify for the Low Income Telephone Assistance Program, the Telephone Assistance Program for the Medically Needy, or the Lifeline Assistance program may also qualify for the FCC's Link Up program. Link Up offers a 50% discount (up to $30.00) on the nonrecurring charge to have a residence access line installed.

Q. WHY IS IT IMPORTANT TO REVIEW THESE PLANS?

A. It is important to review and understand these plans because they will continue under the new rate proposals. These programs do an excellent job of targeting those individuals who most likely are in need of assistance as rates are raised. It is my belief that a targeted subsidy makes the most sense in an environment where competition exists and regulation and traditional funding is changing. These plans provide reasonable, low cost options for customers who truly need assistance in funding their basic telephone service. In Arizona, approximately 160,000 customers are eligible for state and/or federal assistance in paying for telephone service.

Q. WHAT IS THE LIMIT ON WHAT THE CUSTOMER WILL ACTUALLY PAY WITH THE FEDERAL AND STATE SUPPORT MECHANISMS?

A. Under my proposal, customers on the Low Income Telephone Assistance Program will pay $9.92 per month for flat rated single line service. Lifeline customers will pay $13.93 per month. Customers on both programs will receive a waiver of the $3.50 CALC.

4. COMMISSION RESPONSE

Q. HOW DOES U S WEST RECOMMEND THE PRICING ANOMALIES WHICH EXIST IN ARIZONA BE CORRECTED?

A. U S WEST recommends that the price of the residential access line be increased so that it recovers more of the service's cost. We also recommend that the Commission approve the reductions proposed for Long Distance Service and Switched Access Service.

Q. WHAT IS THE RATIONALE FOR THIS APPROACH?

A. This type of approach recognizes:

- The need for the price of a service to cover its TSLRIC cost.
- Subsidies exist today which will be eroded through loss of contribution and through loss of high volume customers.
- As long as subsidies exist and services are priced below their appropriate cost, competition, especially meaningful facilities-based competition, will be thwarted.
- Consumers will benefit from true competition.

5. LOW USE OPTION

Q. YOU INDICATED EARLIER IN YOUR TESTIMONY THAT PART OF YOUR PROPOSAL FOR RESIDENCE BASIC EXCHANGE SERVICE WAS TO CONVERT CUSTOMERS ON THE LOW USE OPTION TO A BUDGET MEASURED PLAN. PLEASE EXPLAIN THIS RESTRUCTURE, AS WELL AS THE RATIONALE FOR YOUR PROPOSAL.

A. Customers using Low Use Option Service as it is currently structured pay a reduced line rate and a $.20 charge for each outgoing call. A very small percentage of customers subscribe to the service, as the $.20 per call charge, when added to the line rate, quickly makes flat rate service more attractive. I am proposing to convert Low Use Option Service customers to a new Measured Service Option, the Budget Measured Plan. Under this plan, customers will receive a one hour usage allowance and then pay $.02/minute for usage over the allowance. The existing line rate of $8.50 will be increased to $11.00, to be consistent with the amount of increase proposed for standard flat rated service.[29] The Budget Measured Plan will not only better meet the needs of the Low Use Option Service customer, but will also be a viable option for many other customers desiring an alternative to flat rated service.

Q. WILL EXISTING LOW USE OPTION SERVICE CUSTOMERS AUTOMATICALLY BE CONVERTED TO BUDGET MEASURED SERVICE?

A. Yes.

[29] Rates do not include temporary surcharge.

Q. ONCE CUSTOMERS HAVE BEEN CONVERTED, IS LOW USE OPTION SERVICE BEING WITHDRAWN AS A SERVICE OFFERING?

A. Yes, it is.

Q. WILL CUSTOMERS BENEFIT FROM THE CONVERSION TO BUDGET MEASURED SERVICE?

A. Yes. With the monthly rate for the new plan, customers will receive one hour's worth of usage which they didn't receive with the Low Use Option monthly rate. Customers will also save on each call they make beyond the one hour per month allowance, as the average length of a residential call in Arizona is approximately four minutes. On the Low Use Option Plan, customers making a four minute call were charged $.20. With the Budget Measured Plan, they will be charged $.08, a significant savings.

6. NONRECURRING CHARGE

Q. YOU MENTIONED PREVIOUSLY YOU WERE ALSO PROPOSING TO REDUCE THE NONRECURRING CHARGE ASSOCIATED WITH INSTALLING A RESIDENCE LINE. WHY IS THIS REDUCTION APPROPRIATE?

A. The nonrecurring charge is being reduced to bring it closer to cost. Arizona currently has the highest residence nonrecurring charge of all the states in the U S WEST region at $46.50. The lower charge of $35.00 will be more attractive to customers and is more in line with the charges competitors charge residence customers for installation. For example, Cox charges residence customers $40.00 to install a line, however, their tariff indicates that charges for the initial connection of service will be waived.[30]

7. ZONE CONNECTION CHARGE

Q. YOU ARE ALSO RECOMMENDING ELIMINATION OF THE ZONE CONNECTION CHARGE, IS THAT CORRECT?

[30] Arizona SCC Tariff No. 1, Page No. 60, Effective 11-4-98.

A. Yes. The $53.30 charge was designed to apply to service placed beyond the base rate area. However, this charge has proven to be a customer irritant and has resulted in a great deal of customer confusion. I am proposing that the charge be eliminated.

8. MULTI-PARTY SERVICE

Q. WHAT IS MULTI-PARTY SERVICE?

A. Multi-party service is the sharing of a residence or business exchange line by more than one user. Eight-party service is presently grandfathered for existing residence and business customers. Four-party and two-party services are offered on a limited basis.

Q. WHAT IS U S WEST'S RECOMMENDED PROPOSAL?

A. We recommend that multi-party service for residence and business customers be discontinued as facilities become available. Eight party service for residential customers will be eliminated immediately, as there are no longer any customers subscribing to the service.

Q. WHY SHOULD MULTI-PARTY SERVICE BE DISCONTINUED?

A. The reason is simple: very few customers subscribe to this service today. It is a service whose market demand has declined to the point of virtual extinction. Because the service does not reflect the majority of customers' needs, it is no longer economical for U S WEST to continue to provide it.

Furthermore, in approving U S WEST's petition to be designated as an eligible telecommunications carrier under 47 U.S.C. §214 (e), the Commission granted U S WEST a waiver to allow additional time to complete the transition of multi-party service to single-party service. (The FCC has excluded multi-party service from being eligible for federal universal service support.)

Q. HOW DO YOU RECOMMEND CUSTOMERS CURRENTLY ON MULTI-PARTY SERVICE BE CONVERTED TO SINGLE LINE SERVICE?

A. We recommend that as facilities become available, multi-party customers have their service transferred to single party lines.

Q. HOW MANY CUSTOMERS WILL BE IMPACTED BY THE ELIMINATION OF THIS SERVICE?

A. U S WEST currently has approximately (redacted) residential customers and (redacted) business customers in Arizona who subscribe to some form of multi-party service. (See proprietary Exhibit DLT-2 for figures.)

Q. WHAT IMPACT WILL THIS PROPOSAL HAVE ON EXISTING MULTI-PARTY CUSTOMERS' RATES?

A. The impact will be minor. I am proposing that, at the conclusion of this rate case, Residence multi-party customers be assessed a $2.50 per month increase per line, consistent with the increase I have proposed for single-party service customers. Upon conversion to single-party service, these customers will begin to pay the single-party rate which will be another minimal increase. For example, a customer currently subscribing to two-party service will pay $14.44 per month (an increase of $2.50) at the conclusion of the rate case. When that customer is subsequently converted to single-party service, their monthly rate will increase to $15.68. Since I am not proposing an increase to business Basic Exchange Service in this case, business multi-party customers will experience just one rate increase as they transition to single-party service. A four-party business customer currently pays $24.98 per month. They will continue paying that rate until they are converted to single-party service, at which time they will pay $32.78, the current single-party business rate.

Q. HOW LONG DO YOU ANTICIPATE IT WILL TAKE TO CONVERT ALL MULTI-PARTY CUSTOMERS TO SINGLE-PARTY SERVICE?

A. Multi-Party Service customers will be converted within 18 months after the conclusion of this case. Conversion cannot begin until the rate case is concluded because it will result in a rate increase to multi-party customers, and such increases are allowable only in a rate case.

9. BASE RATE AREAS

Q. WHAT ARE BASE RATE AREAS?

A. Base Rate Areas (BRA) are geographical areas used for pricing purposes. Customers residing outside of the BRA of an exchange are "rural" customers.

Q. DO CUSTOMERS WITHIN THE BRA PAY THE SAME RATE AS CUSTOMERS OUTSIDE OF THE BRA?

A. No. Customers outside of the BRA pay an additional charge called an Exchange Zone Increment Charge. These additional charges are based on the customer's distance from the BRA boundary.

Q. WHAT CHANGES ARE YOU PROPOSING TO BASE RATE AREAS?

A. I am proposing that the boundaries for some Base Rate Areas be expanded to reflect growth that has occurred in Arizona. Base Rate Area boundaries have not changed since the last rate case, which was filed in 1993. Significant growth has occurred in the state since that time. As areas grow, there becomes a greater concentration of customers further from the exchange central office. This increase in customer density then warrants their inclusion in the BRA in order to be fair and equitable to all customers. New exchange tariff maps are being filed with this case to reflect the expanded boundaries.

Q. HOW MANY CUSTOMERS WILL EXPERIENCE A RATE DECREASE BECAUSE OF THESE BOUNDARY CHANGES?

A. Approximately 185,000 customers will experience a rate decrease due to the expansion of the BRAs.

10. CONCLUSION

Q. BASED ON THIS OVERALL PROPOSAL, WHAT SHOULD THIS COMMISSION CONSIDER REGARDING THE PRICE OF THE RESIDENTIAL ACCESS LINE?

A. The Commission should:

- Understand the impact on U S WEST of new competitive entry, the impact that entry has on monopoly-based rates, and its obligations to identify and eliminate subsidies;
- Recognize the need for each service's price to cover cost; and
- Find that the price proposed by U S WEST will not adversely impact universal service, as the telephone line remains an excellent bargain and there are targeted programs in place to assist low income customers.

For these reasons, U S WEST believes that the requested changes proposed for residential Basic Exchange Service are reasonable, will incent competitive growth, and are in the best long term interests of Arizona customers.

Q. WHAT IS THE OVERALL REVENUE IMPACT OF THE CHANGES YOU HAVE PROPOSED FOR RESIDENTIAL BASIC EXCHANGE SERVICE?

A. The total impact is an annual increase of $32,731,250.

B. BUSINESS BASIC EXCHANGE SERVICE

Q. WHAT ARE THE COMPONENTS OF BUSINESS BASIC EXCHANGE SERVICE?

A. Business Basic Exchange Service in Arizona consists of two recurring pricing components: 1) Dial tone line; and 2) Usage associated with that line. The dial tone line is that portion of the service which provides a subscriber access to the outside world. It is the true "connection" of the telephone to our central office and hence to all users of the public switched network. This connection includes feeder, distribution, and drop facilities. The dial tone line includes the access element which is a key part of universal service. The local usage component is a separate element which reflects switching and average local interoffice usage associated with local calls placed by the customer.

Q. WHAT CHANGES ARE YOU RECOMMENDING TO BUSINESS BASIC EXCHANGE SERVICE?

A. I am recommending that the dial tone line and usage elements be combined into a single, unified rate similar to the way residential service is provided. Rates are not changing-the combined rate will simply be the sum of the existing two components.

Q. PLEASE PROVIDE EXAMPLES OF THIS PRICE RESTRUCTURE.

A. The following shows the current and proposed structure for Phoenix customers:

CURRENT STRUCTURE:

DTL: $15.35
FLAT RATED USAGE: $17.43

PROPOSED STRUCTURE:
FLAT USE SERVICE: $32.78

NOTE: Rates shown do not include temporary surcharge.

Q. HAVE THERE BEEN ANY POSITIVE BENEFITS TO THIS BIFURCATED RATE STRUCTURE?

A. None that I am able to document. In actuality, few customers understand why a service that they see and use as a single service is actually priced separately. The current structure simply does not reflect how the service is viewed by customers, nor how it is offered or marketed.

Q. PLEASE SUMMARIZE THE BENEFITS OF THIS PROPOSAL.

A. The combining of rate elements that U S WEST is proposing for business Basic Exchange Service is consistent with industry rate designs. The restructure will eliminate a potential source of billing errors and a needless and potentially confusing complication on our customers' bills. The proposed structure is consistent with the way residence access lines are priced. Combining of the dial tone line and usage will have no economic impact on business customers and should therefore be adopted by this Commission.

Q. WHAT ADDITIONAL CHANGES ARE YOU PROPOSING FOR BUSINESS BASIC EXCHANGE SERVICE?

A. I am proposing that the $53.30 Zone Connection Charge be eliminated for business customers for the same reasons I described earlier in this testimony supporting elimination of the charge for residence customers. To maintain a proper rate relationship to business access lines, I am also proposing to reduce the monthly rates for 911 and E-911 Service by $.25/month. In addition, I am advocating that the proposed increases to the monthly Exchange Zone Increment rates described under the residence Basic Exchange section of this testimony also apply to business customers. I am also taking this opportunity to reprice Resale/Sharing lines and trunks to provide a more appropriate price differential between measured and flat rated service.

Q. WHAT SPECIFIC PRICE CHANGES ARE YOU PROPOSING FOR RESALE/SHARING SERVICES?

A. I am proposing that the monthly rate for Measured Resale/Sharing Lines (Primary and Additional) be increased from $15.35 to $18.50. In addition, I am proposing that the monthly rate for Measured Resale/Sharing Trunks be increased from $17.16 to $18.50. The price for Measured Resale/Sharing DID trunks will increase from $25.16/month to $26.50/month. (This price equates to the line/trunk charge plus an $8.00 charge for Hunting.) Usage charges associated with these lines and trunks will also increase, as described below.

Q. WHAT CHANGES ARE YOU PROPOSING FOR USAGE ASSOCIATED WITH RESALE/SHARING MEASURED SERVICE?

A. I am proposing that the rate structure for usage charges be simplified. Currently, customers subscribing to Resale/Sharing Measured Service are charged $.03/minute for calls placed between 8 a.m. and 5 p.m. on weekdays. Calls placed during other time periods and on designated holidays are charged $.02/minute. I am proposing that the time differential be eliminated and that the usage charges for all calls, regardless of when the call is placed, be $.03/minute. This will eliminate customer confusion and simplify the offering.

Q. WILL THIS CHANGE APPLY TO ALL RESALE/SHARING MEASURED LINES AND TRUNKS?

A. Yes, it will apply to all residential and business lines and trunks, with the exception of Public Access Lines (PAL). Dr. Wilcox discusses the PAL rate proposals in her testimony.

Q. WHAT IS THE REVENUE IMPACT OF YOUR PROPOSALS FOR BUSINESS BASIC EXCHANGE SERVICE?

A. The annual revenue impact will be ($385,034).

C. MARKET EXPANSION LINE

Q. PLEASE DESCRIBE MARKET EXPANSION LINE SERVICE.

A. Market Expansion Line Service allows incoming calls to be automatically routed to another telephone number, which may be local or long distance in nature. Some customers use the service so that parties calling them will not incur long distance charges. Providing the appearance of having a local telephone number also is an effective marketing tool for businesses who wish to serve a wide geographic area. Customers are billed a monthly rate and are also assessed a charge per forwarded call.

Q. WHAT CHANGES ARE YOU PROPOSING FOR THIS SERVICE?

A. I am proposing to increase the monthly rate from $19.00 to $22.00.

Q. WHAT IS THE REVENUE IMPACT OF THIS CHANGE?

A. The annual revenue impact associated with the Market Expansion Line rate increase is $541,314.

D. LONG DISTANCE SERVICE

Q. WHAT ARE LONG DISTANCE SERVICES?

A. Long distance services are provided to customers in Arizona for switched point-to-point calling outside their local calling area to other exchanges within their Local Access and Transport Area (LATA). Message Telecommunications Service is the most familiar and widely used of U S WEST's long distance products.

Q. DOES U S WEST FACE COMPETITION IN THE INTRALATA LONG DISTANCE MARKET?

A. Yes, it most certainly does. The Commission acknowledged this in April 1996 when they deemed long distance services in Arizona "competitive" and allowed U S WEST pricing flexibility for MTS, WATS, 800 Service and Optional Calling Plans.[31] IntraLATA 1+ equal access was implemented at the same time.

Q. WHAT IMPACT HAS 1+ EQUAL ACCESS HAD ON U S WEST'S LONG DISTANCE MINUTES OF USE IN ARIZONA?

A. U S WEST's share of switched intraLATA long distance minutes has declined dramatically. In April 1996, U S WEST's share of the switched market was (redacted)%. By October 1998, that number had decreased dramatically to (redacted)% (See proprietary Exhibit DLT-2 for figures). These statistics clearly illustrate the competitive nature of the Arizona intraLATA long distance market. However, it should be noted that, in reality, U S WEST's share of the intraLATA long distance market is actually less than these figures represent.

Q. WHY ARE THE U S WEST MARKET SHARE FIGURES OVERSTATED?

A. Market share as depicted by the figures on proprietary Exhibit DLT-2 reflects only measurable switched minutes. Long distance traffic is also carried over dedicated and non-switched facilities. In the June 3, 1998 edition of the Wall Street Journal, AT&T Network Chief, Frank Ianna, was quoted as saying that 50% of AT&T's traffic from business customers runs directly to AT&T's network, bypassing the Bells altogether. He also stated that this number will increase once AT&T's merger with TCG is completed.[32] In addition to bypass through means of owned or leased facilities, companies also avoid the switched network through the purchase of special access or other types of high-capacity private line services from U S WEST or other providers. They may also utilize wireless and internet facilities. To be totally accurate, the intrastate long distance minutes of use flowing through these non-switched facilities should be considered when calculating market share. However, U S WEST has no direct way of knowing how many minutes are being transported since these minutes are not carried and measured via the

[31] Order in Docket No. E-1051-96-160, Issued April 24, 1996.
[32] Wall Street Journal, June 3, 1998, Page A3.

U S WEST switched network. The percentages depicting U S WEST's share of the Arizona intraLATA long distance market shown on proprietary Exhibit DLT-2 represent only switched measurable minutes. They are, therefore, overstated.

Q. IS THE TREND IN ARIZONA CONSISTENT WITH WHAT IS OCCURRING IN THE REST OF THE NATION?

A. Yes, it is. According to the Federal Communication Commission's (FCC) First Quarter 1998 report on Long Distance Market Share, the long distance market share of MCI, Sprint, and "All Other Long Distance Carriers" has been increasing steadily since 1991. However, AT&T, the Bell Operating Companies, and Other Local Telephone Companies experienced market share losses during the same period.[33] Based on the report, Bell Operating Company market share sharply declined from 14.7% in 1991 to 7.2% in 1997. Conversely, MCI's market share in 1991 was 12.1%; by 1997 it had climbed to 17.4%. The market share for "All Other Long Distance Carriers" almost doubled from 9.0% in 1991 to 17.8% in 1997. It appears that the intraLATA competitive long distance market penetration witnessed in Arizona is indicative of what is occurring in the rest of the nation.

Q. WHAT IMPACT HAS LOCAL COMPETITION HAD ON THE INTRALATA LONG DISTANCE MARKET?

A. CLECs offer their customers a complete range of telecommunications services, including interLATA and intraLATA long distance. Facilities-based CLECs such as Brooks Fiber and TCG provide long distance service to their customers via switched and dedicated facilities, completely bypassing U S WEST.[34] For example, Brooks' Arizona tariff includes a rate of $.109/minute for switched intraLATA toll service and $.071/minute for dedicated intraLATA toll service.[35] TCG's tariff allows its business customers to purchase intraLATA toll service for a price of $.0720 for the initial 30 seconds and $.0024 for each additional second.[36] As these examples indicate, local competition has contributed to heightened competition in the intraLATA long distance market.

[33] Long Distance Market Shares, First Quarter 1998, released June 1998 by the Common Carrier Bureau of the FCC. Data is based on total operating revenues of long distance carriers and total long distance revenues for local exchange carriers. MCI experienced a slight decrease, from 17.6% to 17.4% between 1996 and 1997.

[34] Before WorldCom's announced acquisition of Brooks' in October 1997, Brooks had been the preferred provider for both AT&T and MCI.

[35] Arizona C.C. Tariff No. 1, Intelenet Exchange Access Service, Page 20.11, Effective 6/24/98.

[36] A.C.C. No. 1, Page 131.2, Effective 10/31/98.

Q. HAS "DIAL AROUND" REMAINED A LONG DISTANCE OPTION?

A. Yes, "dial around" as a non-traditional means of making a long distance call must not be underestimated. Dial around providers are abundant in Arizona. Exhibit DLT-17 contains just a sampling of dial around ads which have recently been sent to Arizona consumers. Many "dial around" companies have diversified into the 1+ intraLATA equal access market, and vice versa. For example, WorldxChange and VarTec, traditional "dial around" providers, are also 1+ intraLATA carriers in Arizona. Conversely, MCI owns Telecom*USA, a highly-advertised dial-around service, and AT&T recently joined the "dial-around" ranks with its "Lucky Dog" service. Such marketing tactics are being used to "cover all the bases" in a heated battle for the long distance market. With 15% of AT&T customers, 26% of MCI customers and 24% of Sprint's customers using dial-around services; these companies will offer expanded options to gain share.[37]

Q. IS IT NECESSARY FOR U S WEST TO RESPOND BASED ON THE COMPETITIVE NATURE OF THIS SERVICE?

A. Yes. U S WEST must take aggressive steps to remain competitive with its intraLATA long distance services. The proposals made in this docket are a step in the right direction to providing Arizona customers with the benefits of competition.

Q. HOW HAS U S WEST RESPONDED TO THE COMPETITIVE INTRALATA LONG DISTANCE MARKET UP TO THIS POINT?

A. U S WEST recently introduced the Simple Value and Super Savings Calling Plans to provide customers with reduced-rate options. However, as I explained earlier, the subsidies inherent in the existing long distance prices serve to keep residential Basic Exchange Service rates low, below cost, in fact. With the move to price residence Basic Exchange Service towards cost, U S WEST can then coincidentally eliminate a portion of the subsidies represented by the contribution in Long Distance Services. Further reduction in such implicit subsidies must occur if U S WEST is to remain a viable player in the Long Distance market. This can be accomplished by future price increases to the residence access line until such time that it is priced to fully recover its cost, or through the establishment of some other form of explicit subsidy. U S WEST cannot compete with competitive Long Distance providers when its services are artificially inflated to subsidize a monopolistic pricing scheme.

Q. PLEASE EXPLAIN THE CHANGES YOU ARE PROPOSING TO THE STANDARD MTS SCHEDULE.

A. I am proposing to reprice the service as follows:

	Current Per Minute Rate		Proposed Per Minute Rate	
	Day	**E/N/W**	**Day**	**E/N/W**
Business	$0.2994	$0.2200	$0.2800	$0.2800
Residence	$0.3260	$0.1500	$0.2500	$0.1200
Miscellaneous	$0.3000	$0.1620	$0.2800	$0.1200

In addition, the existing 35% discount that applies to all direct dialed intraLATA calls placed from the residence of qualified speech and hearing impaired customers is being increased to 50%.

Q. WHY IS U S WEST PROPOSING MTS PRICE CHANGES?

A. As stated earlier, the restriction that prevents U S WEST from offering interLATA long distance and one stop shopping places the Company at a significant competitive disadvantage. It is necessary to respond with a very aggressive pricing plan. It must be remembered that this service is priced many times above its TSLRIC and Shared cost and such pricing is simply not sustainable in a competitive environment. The per minute rate increase for business customers making calls during evening, night, weekend hours is proposed in an effort to standardize these rates across the U S WEST region, and should have minimal impact on business customers who make only approximately 20% of their calls during these hours.

Q. DO THE PROPOSED PRICE CHANGES TO MTS AFFECT THE PRICES FOR OTHER LONG DISTANCE SERVICES?

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[37] Rocky Mountain News, "AT&T Unveils Lucky Dog Service", 10/8/98.

A. Yes. As MTS prices are reduced, it is necessary to evaluate the prices associated with Optional Calling Plans. As U S WEST reduces the overall prices for MTS, it is necessary to determine if Optional Calling Plans still offer value to customers.

Q. WHAT IS U S WEST'S RECOMMENDATION FOR THE OPTIONAL CALLING PLANS?

A U S WEST recommends the following changes:

- Reduce Peak and Off Peak residential rates for the Simple Value Calling Plan
- Reduce the Evening, Night, Weekend rate for the Arizona Value Calling Plan and grandfather the Plan to existing customers
- Eliminate the Arizona Value Calling Plan II and convert customers to the Super Savings Plan
- Reduce the monthly rate for Business Daytime Connection Plus, as well as the per minute rate
- Eliminate Volume Discount Plans and convert customers to MTS
- Grandfather MetroPac Calling Plan

Each of these changes is discussed below.

Q. WHAT CHANGES DO YOU RECOMMEND FOR SIMPLE VALUE CALLING?

A. I am proposing that the rates be reduced for residence customers for calls made during both Peak and Off Peak periods. Peak rates apply to calls made between 7 a.m. and 7 p.m., Monday through Friday. Off Peak rates are applied to calls placed between 7 p.m. and 7 a.m. Monday through Friday and all day Saturday and Sunday. The current Peak rate of $.25/minute will be reduced to $.22/minute. The current Off Peak rate of $.15/minute will be lowered to $.09/minute.

Q. WHY ARE THESE CHANGES APPROPRIATE?

A. These price changes are being made to maintain the pricing relationship with MTS. If left unchanged, current Simple Value Calling rates would be the same or higher than rates proposed for MTS. Since the plan is designed to provide discounts from U S WEST's standard MTS prices, the reductions are necessary.

Q. WHY ARE YOU GRANDFATHERING THE ARIZONA VALUE CALLING PLAN AND METROPAC?

A. These plans are being grandfathered to better serve customers and to position U S WEST's overall menu of long distance calling plans more favorably in light of the extremely competitive market. U S WEST's goal is to provide customers with plans that have few restrictions, are simple and easy to use and understand, and are competitively priced. To accomplish this, it is necessary to eliminate a number of existing offerings. However, in an effort to minimize customer inconvenience, we are proposing to grandfather the plans to existing customers rather than to simply withdraw them. New customers will be able to choose from other U S WEST long distance plans that are attractively priced to meet their long distance calling needs.

Q. YOU INDICATE YOU ARE ALSO REDUCING THE PRICE FOR THE ARIZONA VALUE CALLING PLAN. PLEASE DESCRIBE THE PRICE CHANGE.

A. I am proposing that the rate for calls made during the evening, night, or weekend time periods be reduced from $.12/minute to $.09/minute.

Q. WHY ARE YOU ELIMINATING THE ARIZONA VALUE CALLING PLAN II?

A. It's been found that this plan, due to its design, has limited customer appeal. Therefore, I am proposing to withdraw it and convert customers to Super Savings which is much more attractively priced and doesn't contain the usage requirements associated with Arizona Value Calling Plan II. This will result in an overall savings for these customers, as they are currently paying $19.20/month which includes 120 minutes (i.e., $.16/minute). The price for each additional minute is $.25 for calls made during the day and $.12 for calls made during evening, night, weekend hours. With Super Savings, customers will pay $.10/minute, regardless of when the call is placed. Customers will benefit from the conversion.

Q. SPECIFICALLY, WHAT REDUCTIONS ARE YOU PROPOSING FOR BUSINESS DAYTIME CONNECTION PLUS?

A. I am proposing that the monthly rate, which includes 60 minutes of usage, be reduced from $10.80 to $8.40. In addition, I am proposing that the per minute rate for additional minutes be reduced from $.17/minute to $.14/minute.

Q WHY ARE THESE NEW PRICE POINTS APPROPRIATE?

A. The prices for this plan are being adjusted to again ensure customers realize a benefit and value by subscribing to an optional calling plan, rather than standard MTS.

Q. WHY ARE YOU ELIMINATING THE VOLUME DISCOUNT PLAN?

A. This is another plan that has limited customer appeal. Customers have indicated they want long distance calling plans that are simple and uncomplicated. The percentage-based Volume Discount Plan is no longer an attractive option for customers. Therefore, existing Volume Discount Plan customers will be converted to MTS. With the MTS rates proposed in this case, the conversion will result in a savings for the average Volume Discount Plan customer.

Q. PLEASE DETAIL THE CHANGES YOU ARE RECOMMENDING FOR OPERATOR SURCHARGES.

A. I am recommending that the Operator Assisted Station-to-Station and Person-to-Person rate elements be revised to reflect different pricing for calls that require full assistance from an operator versus calls where the operator is only required to provide partial assistance. Partial assistance is when the customer dials the terminating number and calls are completed with the assistance of an operator. Full assistance is when the customer elects to have the operator place the entire call for them.

I am recommending that the following rate changes be approved:

	Current	**Proposed**
Calling Card (Mechanized)	$ .50	$ .80
Calling Card (Operator Assist)	$ .85	$2.25
Station (Partial Assist)	$1.30	$2.25
Station (Full Assist)	$1.30	$3.40

Person (Partial Assist)	$3.50	$4.90
Person (Full Assist)	$3.50	$6.05
Connect to DA	$1.50	$2.25
Busy Line Verify	$1.50	$3.00
Busy Line Interrupt	$3.00	$6.00

Q. WHAT ARE YOUR PROPOSED CHARGES BASED ON?

A. The rates proposed will more closely align the charges assessed by U S WEST with those of other operator service providers.

Q. ARE YOU PROPOSING ANY OTHER CHANGES TO OPERATOR SURCHARGES?

A. Yes, I am proposing that the charge to verify or interrupt a busy line apply to lines being used for voice and data communication. Previously, the charges only applied to voice communications. With use of the Internet and the explosion of fax line usage, operators are being asked to interrupt or verify lines in use for data, in addition to voice. Therefore, it is recommended that the application for these charges be updated to reflect today's technology.

Q. IS THIS THE EXTENT OF THE CHANGES YOU ARE RECOMMENDING FOR LONG DISTANCE SERVICE?

A. Yes. The overall revenue impact of these proposals is ($459,110). A summary of these proposals and the associated revenue impacts is attached to this testimony as Exhibit DLT-18.

E. DIRECTORY ASSISTANCE

Q. PLEASE DESCRIBE THE DIRECTORY ASSISTANCE FAMILY OF PRODUCTS CURRENTLY AVAILABLE TO ARIZONA CONSUMERS.

A. U S WEST's portfolio of Directory Assistance offerings consists of the traditional Directory Assistance, National Directory Assistance, Complete-A-Call, and Business Complete-A-Call. Customers dial 1-411 to access any of these services. With traditional Directory Assistance, callers can obtain up to two intraLATA telephone numbers per call. The charge is $.47 per call (not including a temporary $.12 surcharge which was incorporated into the Directory Assistance rate as a result of Decision No. 60381). Customers are allowed one call to Directory Assistance per month at no charge. If a caller dials 1-411 or 411 and requests the telephone number for a party located outside of their LATA, a National DA charge of $.85 applies. Again, two numbers can be requested per call; however, there is not a monthly call allowance associated with National Directory Assistance. Complete-A-Call, available with traditional Directory Assistance, allows the party calling Directory Assistance to be connected to the local or intraLATA long distance telephone number requested. Business Complete-A-Call is a service subscribed to by business customers which allows calls to Directory Assistance to be connected to the business at no charge to the calling party.

Q. IS THERE CURRENTLY A CHARGE FOR COMPLETE-A-CALL AND BUSINESS COMPLETE-A-CALL SERVICES?

A. Yes. The charge for Complete-A-Call is $.35/call. Business Complete-A-Call customers have two pricing options: a per call charge of $.35 or a block of 100 calls for $7.50 per month. These charges do not include a surcharge.

Q. WHAT DO YOU PROPOSE TO CHANGE IN THIS FILING?

A. I propose to restructure and simplify the entire Directory Assistance offering. National Directory Assistance will become the only Directory Assistance service offered by U S WEST. The existing $.85 National Directory Assistance rate will not change. In fact, I propose to add value to the offering by incorporating Complete-A-Call at no additional charge. In essence, Arizona customers will be able to dial 1-411, obtain a telephone number for anywhere in the country, and be connected to local or intraLATA telephone numbers for the rate they are paying for National Directory Assistance today. (Long Distance charges may also apply.) The traditional Directory Assistance offering will be withdrawn and the monthly call allowance eliminated. These changes will eliminate the market for Business Complete-A-Call; therefore, it is being withdrawn as a service offering.

Q. WHY ARE YOU RECOMMENDING THIS CHANGE?

A. I recommend this change to alleviate customer confusion which results from multiple Directory Assistance products. Today, customers dialing 1-411 may be charged varying rates, depending on the telephone number requested. They are charged $.47/call for numbers requested within their own LATA and receive one free call per month (traditional Directory Assistance). Alternatively, if they dial 1-411 and request a telephone number outside of their LATA, they are charged $.85/call and do not receive any free calls per month (National Directory Assistance). Furthermore, if they dial 1-411 and request one telephone number outside of their LATA and another number within their LATA on the same call, they are charged the $.85 charge. The change I am proposing will greatly simplify the service for our customers, who may not understand LATAs or geographic boundaries which differentiate a traditional Directory Assistance call from a National Directory Assistance call. This should result in greater customer satisfaction. The proposal to incorporate Complete-A-Call into the National Directory Assistance offering will further enhance customer satisfaction. The $.85 charge is a competitive price while still being slightly below rates charged by other Directory Assistance providers. The proposed rate is also a more realistic starting point for resale of this service.

Q. WHAT ARE OTHER FIRMS OPERATING IN ARIZONA CHARGING FOR DIRECTORY ASSISTANCE?

A. WorldCom's Resold Local Exchange Tariff on file with the Commission indicates they charge $.47 for each number requested. If a customer requested two telephone numbers, as is allowed with U S WEST's service, the charge would be $.94.[38] AT&T rolled out their "00" Service last year in Arizona. AT&T customers pay $.95/call, which includes call completion. Similarly, MCI WorldCom offers 10-10-9000 Directory Assistance Service. Callers can obtain telephone numbers for anywhere in the country for $.99, which also includes call connection. In all cases, long distance charges apply if the call being completed is not local in nature. These alternative Directory Assistance providers are available to consumers throughout the state. Exhibit DLT-19, advertisements for "00" Service and 10-10-9000 Directory Assistance Service, demonstrate that consumers are being made aware of these alternatives. In addition, telephone numbers may be obtained from many internet sites.

Q. IS THE $.85 CHARGE THE PRICE TO BE IN EFFECT AFTER THE SURCHARGE ON DIRECTORY ASSISTANCE EXPIRES?

A. Yes, it is.

Q. PLEASE SUMMARIZE YOUR PROPOSAL FOR DIRECTORY ASSISTANCE.

A. I am proposing to blend the various Directory Assistance products into one offering, National Directory Assistance. This service will continue to be available to Arizona customers by dialing 1-411 or 411. Customers will be able to request a telephone number for anywhere in the country. Customers requesting numbers within their LATA will be able to be connected to the number requested without an additional completion charge. (If the completed call is long distance in nature, long distance charges will apply.) The charge for the service will be $.85 per call, the existing charge for National Directory Assistance. Two numbers may be requested per call. The call allowance associated with traditional local Directory Assistance is being eliminated, as is Business Complete-A-Call Service. This will position U S WEST's Directory Assistance product favorably with its primary competitors' offerings, which are priced higher and also include call completion.

Q. WHAT IS THE TOTAL REVENUE IMPACT OF THE CHANGES YOU ARE PROPOSING FOR DIRECTORY ASSISTANCE?

A. The total annual revenue impact for this restructure in Directory Assistance is $18,261,316.

F. LISTING SERVICES

Q. WHAT ARE LISTING SERVICES?

A. Listing services provide a variety of options available to both residence and business customers in the way their names appear in our telephone directories and on Directory Assistance.

Q. WHAT ARE THE SPECIFIC SERVICES YOU WOULD LIKE TO CHANGE?

A. I recommend increasing monthly prices for the following Listing services:

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[38] Arizona Tariff No. 2, Section 7, Page 9, Effective 2/19/98.

- Residence and business Privacy Listings;
- Residence and Business Premium Listings;
- Business E-Mail Listings; and
- Business and Residence Uniform Resource Locator Listings.

Exhibit DLT-20 summarizes the Listing Services proposals.

Q. PLEASE DESCRIBE PRIVACY LISTINGS AND THE CHANGES YOU ARE PROPOSING FOR THIS SERVICE.

A. Privacy Listings consist of non-published and non-listed names and telephone numbers. Non-published service offers customers the opportunity to omit their names and telephone numbers from both Directory Assistance records and the printed directory. Non-listed service provides for a customer's name and telephone number to be available from Directory Assistance but limits it from appearing in the printed telephone directory. I am proposing the Non-published Service monthly rates be increased from $1.80 to $3.00 for business customers and from $1.90 to $3.00 for residence customers. I am recommending that the monthly rate for Non-Listed Service be increased from $1.45 to $2.00 for business customers and from $1.55 to $2.00 for residence customers.

Q. WHY SHOULD THESE SERVICES' RATES BE INCREASED?

A. These rates should be increased because Privacy Listings are discretionary services which serve to devalue the public switched network over time. As more customers make their telephone number unavailable for others through the use of such services, telephone service for other customers is devalued. There are now fewer customers for others to call. Because of this, such services should be priced at premium rates.

Q. WHAT SERVICES FALL WITHIN THE "PREMIUM" LISTINGS CATEGORY AND WHAT CHANGES ARE YOU PROPOSING FOR THEM?

A. Premium Listings include Additional Listings, Alpha Listings, Client Main Listings, Foreign Listings, WATS Listings, Mobile Radio Listings, and Mobile Unit Listings. Again, these listings are entirely discretionary. They serve as an inexpensive way for businesses to inform their customers.

I am proposing that the rates for these Premium Listing services be increased for business customers from $3.00/month to $6.00/month. I am also proposing that the 50% discount associated with Premium Listings purchased by residence customers in conjunction with Custom Solutions be discontinued. Only a limited number of customers currently qualify for the discount. Furthermore, the recent introduction of Custom Choice, which provides significant savings to residential customers, makes the Listing discount unwarranted.

Q. ARE THERE ADDITIONAL LISTING SERVICES WHICH ARE IMPACTED BY THIS RATE CASE?

A. Yes. I am also proposing increases to E-Mail Listings and Uniform Resource Locator (URL) Listings. These listings allow customers' E-Mail addresses and URL addresses to appear on Directory Assistance and in the published telephone directories. I am recommending that the monthly rate for E-Mail Listings be increased for business customers from $3.00 to $6.00. I am also recommending that the monthly rate for URL Listings be increased from $3.00 to $12.00 for business customers and from $1.50 to $12.00 for residence customers.

Q. PLEASE EXPLAIN WHY YOU BELIEVE THE PROPOSED RATES FOR INTERNET LISTINGS ARE JUSTIFIED.

A. The rates proposed in this case are the rates U S WEST originally requested for the services when they were introduced. The proposed rates are the same rates that are in effect in twelve other states within U S WEST's region. Standardizing these rates with those in effect in other states will result in operating efficiencies and improved customer service. For example, the billing system used to generate bills for Arizona customers is the same system used to bill customers in Idaho, Wyoming, Colorado, Utah, New Mexico, and Montana. With my proposal, a separate rate table will no longer need to be maintained for Arizona because the rates will be the same as those in the other six states handled by the system. Customer service representatives who interface with Arizona customers are also responsible for serving customers in the same six states mentioned above. My proposal will eliminate the necessity of these representatives having to deal with the inconsistency in price for these services in Arizona, which will result in more rapid response time, as well as increased overall service quality. U S WEST will be able to market and promote the products more cost effectively, since separate advertising campaigns for Arizona will no longer be necessary because of the non-standard rates.

In addition, these listings are entirely discretionary. They are provided as an aid to Arizona customers desiring to contact others through an advanced communications medium, the Internet. Consequently, they should be priced commensurate with their perceived value. As use of the Internet increases, so does the value of these listings from a customer perspective. The "Computer Almanac," available on the World Wide Web, offers these interesting statistics concerning escalating Internet usage:

- About 42% of adults overall say there is a personal computer in their home and 65% of these computer owners have Internet access;
- 53% of small businesses plan to be selling on the Internet within five years;
- One out of ten small businesses advertises on the Internet and the number was expected to triple by the end of 1997;
- This year, 10% of North American households are expected to make online purchases, twice the number who shopped in 1997;
- The Internet is growing so fast that traffic is doubling every 100 days;
- An estimated 62 million Americans now use the Internet. Radio existed for 38 years before it had 50 million listeners. Television took 13 years to get 50 million viewers. The Web reached 50 million U.S. users in just 4 years.[39]

Bill Gates, chairman of Microsoft, has been quoted as saying, "People are starting to adopt a Web lifestyle. No longer are they using the Web only as a source of occasional information; they are routinely using it to pay bills, buy cars, check movie schedules, book restaurants and plan vacations. The Web is becoming a central part of our lives."[40] Electronic commerce is a key national policy objective, so much so that President Clinton has established an interagency task force to oversee many of the administration's programs in this area. One of the most critical components in successfully using the Internet is knowing the address of the site to be accessed. Internet Listings make these addresses readily available to consumers, they are found easily through the telephone directory or through Directory Assistance, and they serve as an inexpensive advertising tool for businesses.

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[39] www.cs.cmu.edu/afs/cs/user/bam/www/numbers.html, 12/1/98.
[40] Access Internet Magazine, 11/98, Page22.

In summary, the rates as proposed are appropriate in light of the increasing value the services provide to the growing number of Internet users. The proposal will also allow U S WEST to better serve its customers and realize cost savings as a result of the consistency gained by the price changes.

Q. WHAT IS THE REVENUE IMPACT ASSOCIATED WITH YOUR LISTING PROPOSALS?

A. The annual revenue effect for changes proposed to Listing Services is $7,744,085.

G. CUSTOM CALLING SERVICES

Q. WHAT CHANGES ARE YOU PROPOSING FOR RESIDENCE CUSTOM CALLING SERVICES?

A. I am proposing to increase the monthly rate for Caller Identification (Caller ID)-Name and Number from $5.95 to $6.95. I am also proposing to increase the Caller ID-Number monthly rate from $5.50 to $6.95

Q. ARE YOU PROPOSING ANY OTHER CHANGES TO RESIDENCE CUSTOM CALLING SERVICES?

A. Yes. As a result of the rate changes I am proposing for Caller ID, I am recommending that the monthly rates for U S WEST Receptionist Service be increased by the same amount. Therefore, the monthly rate for U S WEST Receptionist-Name and Number will increase from $10.95 to $11.95 and the rate for U S WEST Receptionist-Number will increase from $10.50 to $11.95. The rates for these two services are the summation of the individual rates for Call Waiting and Caller ID and are therefore impacted by rate changes made to either product.

Q. WHY ARE THE RATES FOR CALLER ID SERVICES BEING INCREASED?

A. I am proposing these increases because Caller ID has increased in value to the customer over the past few years. In addition, U S WEST has the lowest average price for Caller ID of all of the Regional Bell Operating Companies (RBOCs).

When Caller ID was initially introduced in Arizona in 1993, the technology was new and customers who subscribed to the service found that there were a great number of calls that were unidentified and appeared as "out of area", "unknown", or "unavailable" on their Caller ID units. This was due, in part, to the fact that the Signaling System 7 (SS7) technology that supports Caller ID was not widely deployed. Additionally, long distance carriers were not required to pass on the calling number information on calls placed by their customers to the local exchange carrier (U S WEST). Finally, PBX manufacturers did not have the technology in their switches to allow the name and number information to pass through their switches.

Caller ID Service is far more valuable to customers today because several improvements have reduced the number of calls that carry a message of "unavailable." Over the past year, many local and long distance service providers have upgraded their systems to SS7. The FCC has ordered long distance carriers to pass on the calling number information on calls they carry. U S WEST has negotiated agreements with a number of other local exchange carriers to allow us to pass the calling name and number on to our customers. PBX manufacturers are working to find ways to allow for the passing of Caller ID information from their switches. Finally, U S WEST has automatically placed Anonymous Call Rejection (ACR) on the lines of all residence customers who order Caller ID. (When ACR is activated, the service rejects calls from numbers which have purposely blocked their name and number from appearing to the customer, thus saving the customer from seeing yet another "unavailable" indicator on their Caller ID unit.)

As indicated above, U S WEST has the lowest average rate for Caller ID among all of the RBOCs. The average rate ranges from $6.52 to $8.56 in the other RBOCs.

Q. WHY ARE YOU PROPOSING A GREATER INCREASE TO CALLER ID-NUMBER THAN YOU ARE PROPOSING TO CALLER ID-NAME AND NUMBER?

A. Less than one-fourth of one percent of all customers who have Caller ID have Caller ID-Number. I am proposing that the services be priced the same to deter future sales of the Caller ID-Number product because of the demonstrated advantages of Caller ID-Name and Number over Caller ID-Number.

Q. WHAT IS THE REVENUE IMPACT OF YOUR CUSTOM CALLING PROPOSALS FOR RESIDENCE CUSTOMERS?

A. The annual revenue effect for the changes I am proposing to residence Custom Calling services is $3,292,216.

Q. ARE YOU PROPOSING CHANGES TO BUSINESS CUSTOM CALLING SERVICES?

A. Yes. I am proposing that all existing packages of Custom Calling Services with the exception of SMARTSET^{sm}, SMARTSET PLUS^{sm} and Call Manager Connection be grandfathered.

Q. WHY ARE YOU PROPOSING TO GRANDFATHER THE BUSINESS CUSTOM CALLING PACKAGES?

A. The original packages were introduced to give customers a discount when they purchased two, three, four, or five Custom Calling features. Over the years, more and more Custom Calling features have been introduced and U S WEST has found that the number of subscribers to these packages has declined by almost 10% over the last year. U S WEST now offers the packages mentioned above that more accurately reflect the needs of the marketplace.

Q. IS THERE A REVENUE IMPACT ASSOCIATED WITH GRANDFATHERING BUSINESS CUSTOM CALLING PACKAGES?

A. Yes. Since the packages are being grandfathered, a nonrecurring charge is no longer appropriate. The revenue impact associated with eliminating the nonrecurring charge for these packages is ($37,388).

Q. IS THIS THE EXTENT OF THE CHANGES YOU ARE PROPOSING FOR CUSTOM CALLING SERVICES?

A. Yes. Custom Calling changes are summarized on Exhibit DLT-21.

H. SINGLENUMBER SERVICE

Q. WHAT CHANGES ARE YOU PROPOSING TO SINGLENUMBER SERVICE?

A. I am proposing that SingleNumber Service be discontinued as a product offering to new subscribers and current subscribers be grandfathered. Under the grandfathering provisions, current customers will be allowed to change or add to their existing service. I am also proposing that the rate stabilized rates be removed since there are no customers.

Q. WHY ARE YOU PROPOSING THAT SINGLENUMBER SERVICE BE GRANDFATHERED?

A. The onset of Local Number Portability brings significant changes to SingleNumber Service. The ability of a customer to "port" a telephone number and its associated customer data to a CLEC removes vital information about that customer from U S WEST databases.

To SingleNumber Service, the most important information associated with that "ported" telephone number is the ZIP Code information. Without valid ZIP Code data, the value of SingleNumber Service is lost, since calls are routed to their destination based upon the five or nine digit ZIP Code data resident on U S WEST's customer records. "Porting" the number moves this vital data to another company's database, which may or may not provide U S WEST with the ability to retrieve the ZIP Code associated with the calling number at the time the call is placed to the SingleNumber Service subscriber. This will result in an increase in calls that are directed to the subscriber's default location instead of routing the call to the appropriate location. This will ultimately degrade the value of SingleNumber Service to the subscriber.

I. SCREENING SERVICES

Q. WHAT PRODUCTS ARE INCLUDED IN SCREENING SERVICES?

A. Screening Services include CustomNet Service, Billed Number Screening, Toll Restriction, ScoopLine Access Restriction, 900 Service Restriction, and Carrier Access Blocking (10XXX1+/10XXX011+).

Q. WHAT CHANGES ARE YOU PROPOSING FOR CUSTOMNET SERVICE?

A. I am proposing to provide CustomNet customers with more choices relative to the types of calls to be blocked from outgoing lines and trunks. With Option 1, calls made using a

1+ dialing pattern will be blocked. With Option 2, such calls will not be blocked. With both options, long distance calls made by dialing "0" will not be permitted unless the calls are collect or billed to a third party or a calling card.

Q. ARE THE RATES AND CHARGES ASSOCIATED WITH CUSTOMNET CHANGING WITH THIS PROPOSAL?

A. Yes, some are. Current and proposed rates are depicted on Exhibit DLT-22. I am proposing to establish separate residence and business rates for individual lines equipped with CustomNet. Nonrecurring charges will be reduced for residence and business customers. In addition, I am proposing to reduce the monthly rate for residence customers.

Q. PLEASE EXPLAIN THE BILLED NUMBER SCREENING PRODUCT.

A. Billed Number Screening is a service that provides for the blocking of collect and/or billed to third number calls at a subscriber's billing number. If a party attempts to make a collect or billed to third number call from a subscriber's telephone number provisioned with Billed Number Screening, the call will not be completed. It has previously been provided at no charge; however, in this case, I am proposing to institute a nonrecurring charge for residence and business customers. In addition, I am establishing a small monthly rate for residence customers. These rates and charges appear on Exhibit DLT-22.

Q. WHY IS U S WEST PROPOSING TO CHARGE FOR THE SERVICE AT THIS TIME?

A. The charges proposed are designed to recover the costs associated with the service. They are extremely reasonable for the service provided.

Q. ARE YOU RECOMMENDING PRICE CHANGES FOR THE TOLL RESTRICTION PRODUCT?

A. Yes, I am proposing to reduce the nonrecurring charge for business customers and increase the nonrecurring charge for residence customers. In addition, I am proposing to introduce a monthly rate for residence customers of this product. The specific rate changes are depicted on Exhibit DLT-22.

Q. ON WHAT BASIS ARE YOU PROPOSING THESE RATE CHANGES?

A. Introducing the residence monthly rate is being done to recover costs associated with this service. The costs are presented in Mr. Thompson's testimony. The business nonrecurring charge is being reduced to make the offering more attractive to business customers. An increase in the residence nonrecurring charge is designed to generate additional revenue in this case.

Q. YOU ARE ALSO PROPOSING TO ELIMINATE SCOOPLINE ACCESS RESTRICTION SERVICE. PLEASE EXPLAIN.

A. ScoopLine is being withdrawn as a product offering as described in Dr. Wilcox's testimony; therefore, this service will no longer be necessary. Other types of 900 calls may be blocked using 900 Service Access Restriction.

Q. WHAT CHANGES ARE YOU PROPOSING FOR 900 SERVICE ACCESS RESTRICTION IN THIS CASE?

A. I am proposing to institute charges as shown on Exhibit DLT-22. Previously, U S WEST did not assess charges to have a line blocked from making calls to telephone numbers with a 900 prefix; however, to recover costs associated with provisioning the service, a nonrecurring charge is being introduced for residence and business customers. A small monthly rate is also being established for residence customers. These price changes are being made to recover costs associated with provisioning the service.

Q. IN ADDITION TO THESE CHANGES, YOU ARE ALSO PROPOSING TO INCREASE RATES FOR CARRIER ACCESS BLOCKING, ISN'T THAT CORRECT?

A. Yes, it is. I am proposing to have distinct residence and business rates. Nonrecurring charges for residence and business customers will be increased. The monthly rate for residence customers is also being increased. The specific pricing proposals for this service are depicted on Exhibit DLT-22.

Q. WHAT IS THE RATIONALE BEHIND THE PROPOSED RATE INCREASES?

A. These rates are being increased to gain consistency in pricing for the product across the U S WEST region. Again, this will result in operating efficiencies and improved customer service.

Q. WHAT IS THE OVERALL REVENUE IMPACT FOR SCREENING SERVICES?

A. The combined revenue impact for all Screening Services is $6,291,917.

Q. DOES THIS CONCLUDE THE PRICING PROPOSALS YOU ARE SUBMITTING IN THIS CASE?

A. Yes, it does.

III. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The telecommunications marketplace in Arizona is changing rapidly, and competitive alternatives to traditional U S WEST services have become a reality. In addition to the wide range of competitive alternatives available in the Long Distance market, major facilities-based providers are now offering local services to Arizona customers. Based on the degree to which competitors are active in the Phoenix and Tucson areas, I recommend relaxed regulatory oversight in specific wire centers or "competitive zones." Implementation of competitive zones will enable U S WEST to respond to consumers under conditions consistent for all carriers.

I am also recommending that all new services introduced by U S WEST be automatically classified as "competitive." New services are, by definition, optional and discretionary and will succeed or fail based upon market acceptance. Streamlined competitive classification of new services will enable U S WEST to respond quickly to market demands without the regulatory delays inherent in the existing reclassification process. In addition, I am proposing that U S WEST be granted the ability to promote its products and services under the same conditions as is afforded to its competitors.

Finally, I have outlined a number of pricing changes designed to rebalance rates, reduce subsidies between services and move residential Basic Exchange prices toward cost-recovery levels. These price changes are in keeping with the evolving competitive market in Arizona, and are supportive of the growth of true competition.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF)	
U S WEST COMMUNICATIONS, INC., A)	
COLORADO CORPORATION, FOR A)	
HEARING TO DETERMINE THE EARNINGS)	DOCKET NO. ____________
OF THE COMPANY, THE FAIR VALUE OF THE)	
COMPANY FOR RATEMAKING PURPOSES,)	
TO FIX A JUST AND REASONABLE RATE OF)	
RETURN THEREON AND TO APPROVE RATE)	
SCHEDULES DESIGNED TO DEVELOP SUCH)	
RETURN)	

EXHIBITS OF

DAVID L. TEITZEL

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

Companies With CLEC & ILEC Applications – Granted OR Pending
(CLEC = Competitive Local Exchange; ILEC = Incumbant Local Exchange)

GSTNET (AZ) INC
5210 E WILLIAMS CIRCLE
SUITE 550
TUCSON AZ 85711-0000
(520) 290-1255

AT&T WIRELESS SERVICES INC
5000 CARILLON POINT
KIRKLAND WA 98033
(206) 828-8611 OR (206) 828-8452

METROPOLITAN FIBER SYSTEMS OF ARIZONA INC
225 BUSH STREET
SUITE 485
SAN DIEGO CA 92110-0000
(415) 743-4959 OR (415) 743-4975

ACSI LOCAL SWITCHED SERVICES
131 NATIONAL BUSINESS PARKWAY
SUITE 100
ANNAPOLIS JUNCTION MD 20701-0000
(301) 617-2400 OR (301) 617-4277

NORTH COUNTY COMMUNCATIONS CORPORATION
3802 ROSENCRANES
SUITE 485
SAN DIEGO CA 92110-0000
(619) 497-4750

OPTEL (ARIZONA) TELECOM INC
1111 WEST MOCKINGBIRD LANE
SUITE 10000
DALLAS TX 75247-0000

M&L ENTERPRISE INC
P O BOX 35
MIDVALE OH
(800) 462-4523 OR (208) 355-2222

TRANSAMERICAN TELEPHONE INC
209 EAST UNIVERSITY
DENTON TX 76201-0000
(817) 382-0533

U S WEST COMMUNICATIONS INC
ROOM 1010
3033 N 3RD STREET
PHOENIX AZ 85012-0000
(602) 866-0072

COX ARIZONA TELECOM II LLC
COX COMMUNICATIONS
17602 N. BLACK CANYON HWY
(602) 866-0072

CABLE PLUS COMPANY LP
TELEPHONE PLUS
11400 S E 6TH STREET
SUITE 120
BELLEVEUE WA 98004-0000
(206) 462-2090 OR (206) 462-2092

R.C.P. COMMUNICATIONS
300 WEST OSBORN
SUITE 101
PHOENIX AZ 85013
(602) 234-9887 OR (602)

COMM SOUTH COMPANIES
6830 WALLING LANE
DALLAS TX
(972) 690-9955 OR (206) 462-2092

MOUNTIAN TELECOMMUNICATIONS INC
3360 NORTH COUNTRY CLUB ROAD
TUCSON AZ 85716-0000
(520) 321-4100 OR (520) 321-0085

U.S. TELCO INC
UST COMMUNICATION
4001 MCEWEN DRIVE SUITE 200
(972) 392-6757 OR (972) 392-6723

TEL SAVE INC
THE PHONE COMPANY
6805 ROUTE 202
NEW HOPE PA 18938-0000
(215) 862-1500 (215) 862-1085

AMERITECH COMMUNICATIONS
INTERNATIONAL INC
2000 WEST AMERITECH CENTER DR
HOFFMAN ESTATES IL
(847) 248-3370 OR (847) 248-3198

AT&T COMMUNICATIONS OF THE MOUNTAIN STATES
2800 N CENTRAL AVE SUITE 828
PHOENIX AZ 85004-0000
(602) 964-5558

SPRINT COMMUNICATIONS LP
8140 WARD PARKWAY
KANSAS CITY MO 64114-0000
(703) 243-4600

GTE COMMUNICATIONS CORP
1200 WALNUT HILL LANE
SUITE 2000
IRVING TX 75038 0000
(214) 714-0244 OR (214) 714-0534

ELECTRIC LIGHTWAVE INC
8100 N.E. PARKWAY DRIVE
SUITE 200
VANCOUVER WA 98662-0000

FRONTIER TELEMANAGMENT
180 SOUTH CLINTON
ROCHESTER NY 14646-0000

ARIZONA TELEPHONE COMPANY
%JOHN ZEILER-TDS TELECOM
2495 N MAIN ST
CHOCTAW OK 73020-0000
(405) 390-8181 OR (405) 390-8992

BROOKS FIBER COMMUNICATIONS OF TUCSON
177 N CHURCH STREET
PRESIDO SUITES
TUCSON AZ 85701-0000
(520) 622-8800

WINSTAR WIRELESS OF ARIZONA INC
7799 LEESBURG PIKE
SUITE 401 SOUTH
TYSON'S CORNER VA 22403
(703) 917-6556

DIGTAL SERVICES CORPORTION
2300 CLARENDON BL
SUITE 800
ARLINGTON VA 22201-0000
(703) 527-9433

MCI METRO ACESS TRANSMISSION SERVICES
201 SPEAR STREET
9TH FLOOR
SAN FRANCISCO CA 94105-0000
(415) 228-1199 OR (415) 228-1746

ACSI OF PIMA COUNTY INC
131 NATIONAL BUSINESS PARKWAY
SUITE 100
ANNAPOLIS JUNCTION MD 20701-0000
(301) 617-4200

CITIZENS TELECOMMUNICATIONS COMPANY OF AZ LLC
3 HIGH RIDGE PARK
STAMPFORD CT 06905-0000

COX ARIZONA TELECOM INC
17602 N BLACK CANYON HWY
PHOENIX AZ 85302
(602) 866-0072

INTERMEDIA COMMUNICATION INC
3625 QUEEN PALM DRIVE
TAMPA FL 33619-1309

CENTURYTEL OF SOUTHWEST INC
P O BOX 4605
MONROE LA 71211-4065
(318) 388-9000 OR (318) 388-9602

DIGITAL DIAL COMMUNICATIONS INC
624 SIX FLAGS DRIVE SUITE 214
ARLINGTON TX 76011 0000

SUPRA TELECOMMUNICATIONS AND
INFORMATION SYSTEMS INC
2620 SW 27TH AVE
MIAMI FL 33133-0000
(305) 476-4220 (305) 476-4282

SAN CARLOS APACHE TELECOM UTILITY INC
% STEVE M TITLA
P O BOX 701
245 S HILL
GLOBE AZ 85502
(334) 368-8600

MICRO WAVE SERVICES
3 BALA CYNWYD PLAZA EAST
SUITE 502
BALA CYNWYD PA 19004
(610) 660-4910

LCI INTERNATIONAL TELECOM CORP
8180 GREENSBORO DRIVE
SUITE 800
MCLEAN VA 22102 0000
(703) 610-4866 OR (703) 848-4404

TCG PHOENIX
2730 E CAMELBACK ROAD
PHOENIX AZ 85016
(602) 912-9898

ACCESS NETWORK SERVICES
8201 PRESTON LANE
SUITE 350
DALLAS TX 75225

REDACTED

REDACTED

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Arizona Corporation Commission
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AT&T Completes TCG merger;
TCG Now Core of AT&T Local Services Network Unit.
Read More.

Switched Services

Products and Services

At TCG, we offer a series of switched services that are backed by our guaranteed, reliable and disaster-resistant SONET fiber optic backbone network.

Together with 24 hour performance monitoring, fully redundant architecture and a 4 way uniterrupted power supply backup for all critical switching components, TCG offers you the services that you need with the reliability that you deserve!

Select one of the following switched services to learn more:

- PrimeReach(sm) Service
  Affordable, reliable regional services without having to give up your existing local area services.
- PrimeXpress(sm) Service
  A premiere switched line of business digital trunking service providing PBX users with access to TCG's switching center and switch-resident calling services.
- IXC Gateway Service(sm)
  Provides Interexchange Carriers an alternative to switched offerings provided by the incumbent Local Exchange Companies.
- PrimePath(sm) Service
  A reliable local calling service with access to your choice of long distance carriers.
- PrimePlex(sm) Services
  Flexible ISDN services that give you productivity enhancing power to meet the demands of today and the challenges of tomorrow.
- PrimeNBX(sm)
  A shared PBX service that is a flexible telecommunications solution for your business.
- PrimeCard(sm)
  Calling card solutions

WHATS NEW
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Switched Services
Enhanced Data Services
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- PrimeOne(sm) & PrimePlus(sm)
  Local & Toll Usage Plans

- TCG USA(sm)
  TCG's United Savings Advantage qualifies you for volume discounts based on your services with us in two or more cities!

- PrimeDistance(sm) Service
  Providing the highest quality service for all domestic and international long-distance calls - all at competitive rates.

- CERFtone(sm) Service
  An integrated Voice and Internet solution for Business, from America's Premier Local Telecommunications Provider.

AT&T

Suite 100
2730 E. Camelback Road
Phoenix, AZ 85016

October 8, 1998

[redacted]
2101 West Jackson Street
Phoenix, AZ 85009

Dear Ms. [redacted]

Thank you for giving AT&T Local Services the opportunity to meet your telecommunications needs. Below you will find pricing for the AT&T services we discussed:

Services @ 2101 West Jackson Street

	US West	AT&T	Savings w/ AT&T
Centrex 21 (15) * Analog Two-Way Trunks	$38.52	$32.96	$83.40/mo. / $1,000.80/yr.
Business Line (4)	$41.56	$32.96	$17.20/mo. / $206.40/yr.
Totals	$744.04	$626.24	$117.80/mo. / $1,413.60/yr.

* AT&T does not charge customers for the Federal Access Fee and we do not charge for Hunting.

Thank you for your time and I look forward to working with you in the near future.

Sincerely,

Davis P. Magee

Davis P. Magee
Account Executive
AT&T Local Services

Recycled Paper

Arizona
Business
Magazine
Nov/Dec 1998

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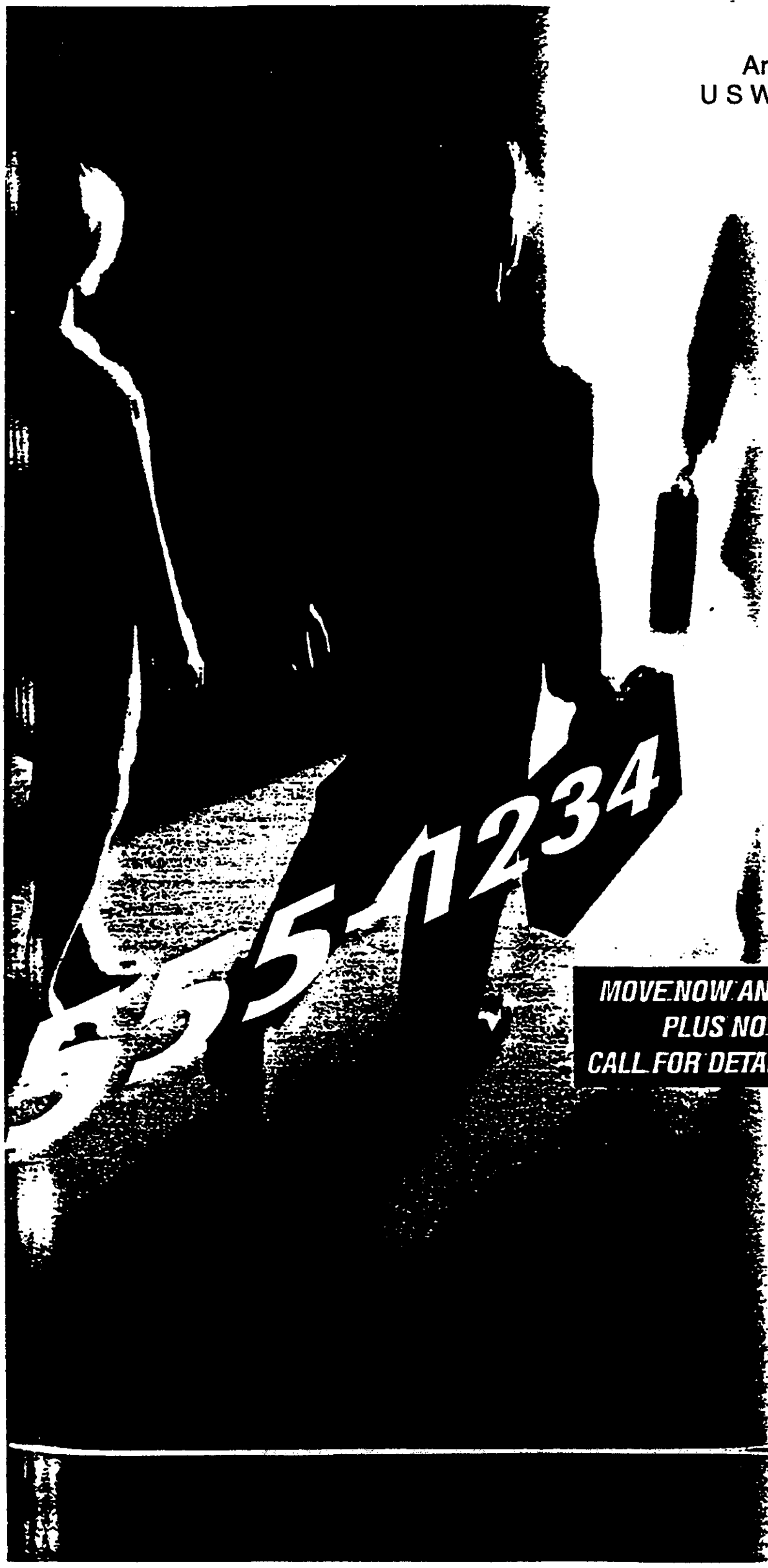

to Electric Lightwave... and your number moves with you.

You can take it with you* ... and improve your service with clear, flexible voice/data/video solutions. Your number moves with you in one seamless transfer. Electric Lightwave is all about business telecommunications moving smoothly — reliably — with a commitment to strong customer relationships. That's why we make it easy to choose, easy to switch.

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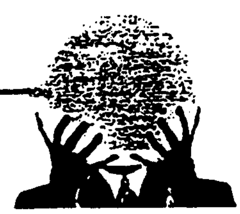
www.eli.net



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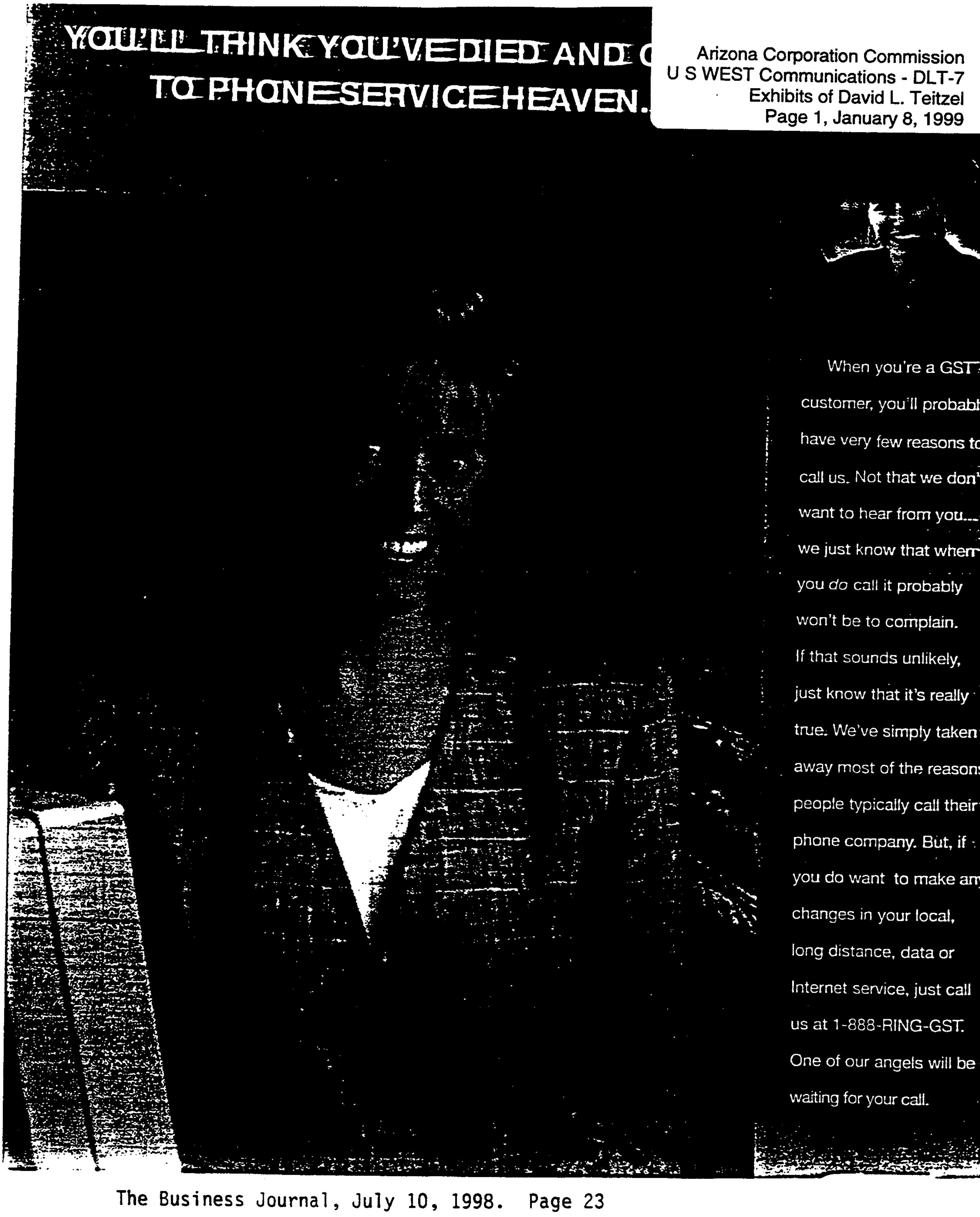

The Business Journal, July 10, 1998. Page 23

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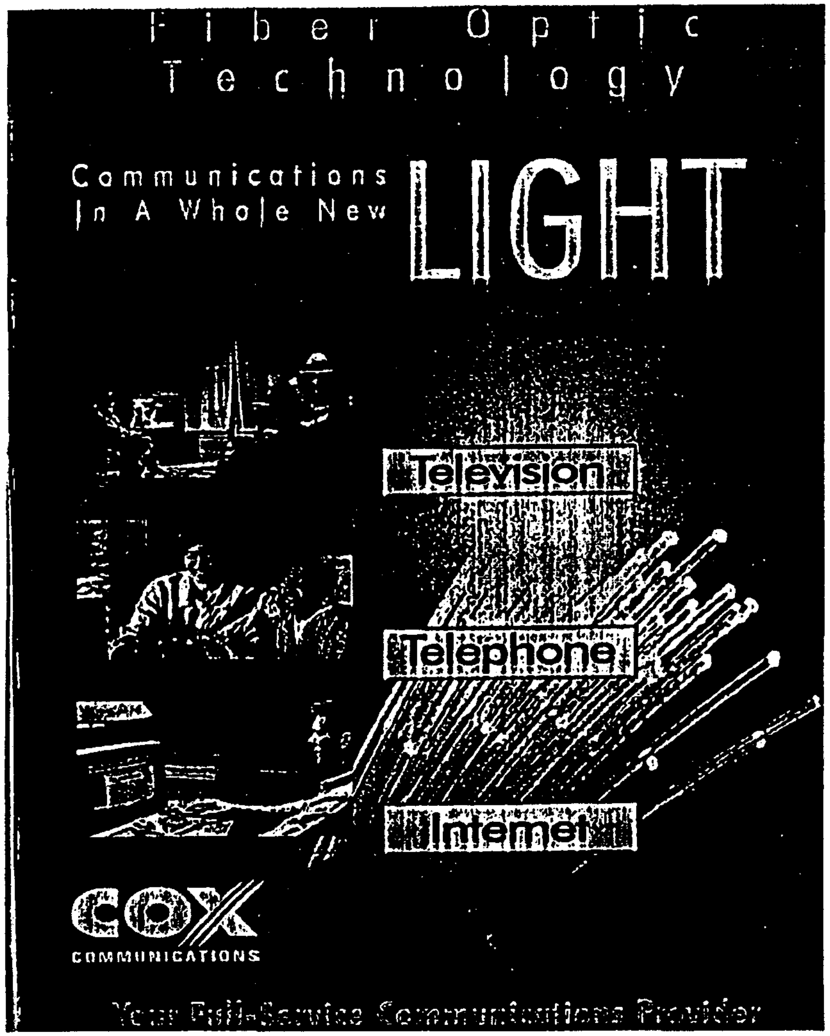
Phoenix Direct Mail



100 Years

James M. Cox

A 100-Year Heritage With National Backing & Local Service

You've come to Expect The Best from Cox Communications, an industry leader in communications with a history of innovation and service dating back to 1898. Over the past 100 years, we've followed a simple and powerful philosophy: "Valuable products supported by customer care create customer loyalty."

A National Communications Leader - Dating Back 100 Years

Cox Enterprises began this communications tradition in 1898 with the first Cox newspaper founded by James M. Cox, former Ohio governor and presidential candidate. Cox expanded to radio (1934), followed by broadcast TV (1948), cable TV (1962), wireless communications (1994) and interactive media (1995).

Since becoming a public company traded on the New York Stock Exchange (NYSE:COX), Cox has expanded its communications offerings with the launch of high speed data and long-distance telephone service in 1996, and local telephone service and digital TV service in 1997.

Cox Communications is among the nation's largest broadband communications companies, delivering television, telephone and Internet services including cable television, local and long-distance telephone service and high-speed Internet access. Today, Cox serves more than 3.3 million customers in 14 different states.

Locally Tested And Proven Technology - In The Valley Today

Locally, you have looked to Cox Communications, a leader in the cable television industry since the early 1960's, for a wide variety of in-home news, entertainment, information and sports programming through our traditional cable service.

As we continue to complete our $300 million superior fiber optic network ahead of schedule, we begin to offer Cox Digital TV, Cox Digital Telephone and Cox@Home - allowing us to become your full-service communications provider of choice, offering quality television, telephone and Internet technology for the 21st Century. Cox's long term strategy has been to maximize the vast capability of its broadband delivery network to offer customers a reliable, easy and economical full-service communications plan.

Through our cable television business and the telephone and Internet services we have begun to offer, we are delivering access to entertainment, people and information. Cox is delivering enhanced reliability, local customer service, and advanced technology. Technology which has been tested. And, IS PROVEN!

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[redacted]

Phoenix Direct Mail

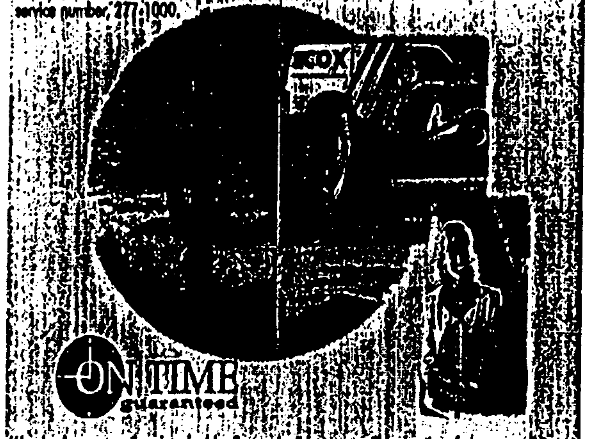
Serving You Is Our Priority - Our Service Is 99.9% Reliable, Local and On-Time Guaranteed

Technology is only as good as the people behind it, and Cox employees are among the finest. Our employees are highly trained and committed to providing you top-quality products, the very best value and legendary customer service you deserve.

We're working 24 hours a day to create the most reliable network possible through fiber optic technology and innovative design. This dedication earned Cox Communications a 99.9 percent network reliability in 1997. Once we complete our fiber optic network upgrade, we expect our reliability to improve even more.

To guarantee reliability second to none, Cox pioneered a unique Ring-in-Ring network architecture which sends your signal along two different routes within our fiber optic network. If one route becomes blocked, your signal is rerouted through the second route allowing you to receive clear, uninterrupted reception.

Cox employees live and work in the same communities as you do and understand the importance of providing you with the legendary, award-winning customer service you deserve. We are available when you need us - 24 hours a day, 365 days a year - by calling our toll-free, Valleywide customer service number, 277-1000.



We also know your time is valuable. So we don't just say we'll be on time for your connection or service appointment, we guarantee it! Cox Communications' On-Time Guaranteed commitment guarantees your connection will be on time, or it's FREE. And if we're late for a service appointment, we'll credit your account $20.00.

Cox Communications Fiber-Optics Network - Delivers The Latest Digital Services

You've come to Expect The Best from Cox Communications in great television entertainment and customer service - and now our investment in technology will allow us to bring you several exciting new services.* Our superior fiber optic network enables us to transmit a greater amount of video, voice and data to your home than any other provider - including the local telephone company - all through one single line to your home.

COX @ Home

AVAILABLE NOW...In Upgraded Areas

Cox@Home delivers access to the Internet at speeds up to 100 times faster than traditional phone modems. You can cruise the web as fast as you can click your mouse and leap from site to site instantaneously when you connect with Cox@Home. Your graphics will load instantly, and large files that normally take 30 minutes to down-load will transfer in mere seconds. Visit our website: www.phx.cox.com

COX Digital TV

COMING SOON

Look forward to an explosion of new programming and advanced services that place enhanced levels of choice, convenience and control at your fingertips all with Cox Digital TV. Cox Digital TV delivers new cable networks, additional premium services, enhanced pay-per-view, digital music channels, and numerous new networks grouped by genre. In addition, parents will be able to screen out certain programs based by rating and content our interactive program guide.

COX Digital Telephone

COMING SOON

As Cox Digital Telephone becomes available, you will receive superior reliability and voice quality, as well as a competitively priced alternative for local and long distance residential and business phone service. The extensive capacity of our facilities-based network allows Cox Digital Telephone to deliver you advantages over traditional residential phone service, including additional phone lines at significant savings. Plus, you can expect to enjoy the telephone services and features you use today. Cox Digital Telephone will provide better choice, technology, customer service and value to Cox customers.

*Cox is introducing these services throughout the Valley as the fiber optic network is upgraded. We will notify you when these services are available in your area.

Ratecard Gilbert

Best Values

HOLLYWOOD HITS	Save over	$ 6.50
Virtually everything Hollywood has to offer, from every major studio! You receive HBO/HBO2, Showtime and STARZ! - Hollywood's top theatrical releases, great specials and family classics - Includes Cox Classic service, set-top converter and remote control.		$ 51.50
EXTREME ENTERTAINMENT	Save over	$ 6.50
Maximum movies! Superstar concerts! Professional boxing! Stellar original programming! You receive HBO/HBO2, Cinemax and Showtime, includes Cox Classic service, set-top converter and remote control.		$ 51.50

MONTHLY SERVICE RATES	
COX LIMITED BASIC	$ 11.45
COX EXPANDED SERVICE*	16.75
COX CLASSIC (Includes Cox Limited Basic and Cox Expanded Service)	28.20
EQUIPMENT & CONNECTION RATES	
ADDITIONAL OUTLET – Monthly rate	$ FREE
ADDRESSABLE CONVERTER – Monthly rate	1.56
REMOTE CONTROL – Monthly rate	0.53
NEW CONNECTION	37.44
RECONNECT	24.96
ADDITIONAL OUTLET CONNECTION – At time of connect	9.60
ADDITIONAL OUTLET CONNECTION – Separate trip	[illegible]
IN WALL CABLE CONNECTION (Wallfish)	
RECONNECT TRANSFER OF SERVICE	
24-HOUR CABLE RELATED SERVICE REPAIR	
ADDITIONAL SERVICES	
HBO/HBO2	
SHOWTIME	
CINEMAX	
THE MOVIE CHANNEL	
STARZ!	
COX WIRELINK*	

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Page 2 of 4, January 8, 1999

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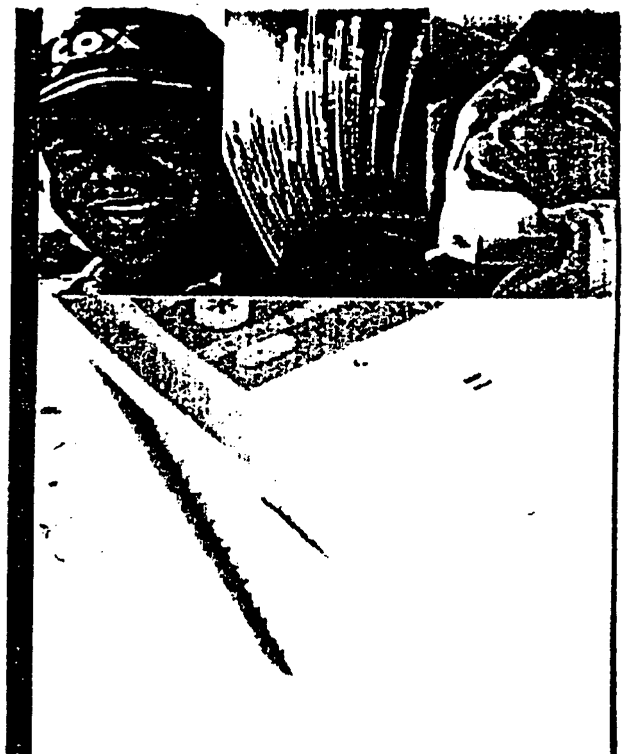

Announcing A Better Choice In Local Phone Service

Arizona Corporation Commission
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Page 3 of 4, January 8, 1999

[redacted]

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Cox is bringing a better choice in telephone service to your home: Cox Digital Telephone service. It's a better choice because it gives you greater value. For starters, you'll pay less than you're paying now for the same monthly services with U S West. Guaranteed. Plus, your calls will be immediately connected over our superior digital fiber-optic network. If you ever need assistance or repairs, you'll have the best people in the industry on call, 24 hours a day.

Compare And You'll Choose Cox.	COX Digital Telephone	U S West
Monthly Line Charge	$11.75	$13.43
Local Toll Calls	10¢/min.	Up to 30¢/min.
Second Line	$6.50	$13.43
Worldwide Long Distance	Yes	No
Installation Charge	FREE*	$46.50

Better Technology

Cox Digital Telephone service is provided over an upgraded superior digital fiber-optic network that has made Cox first in reliability. Our state-of-the-art technology assures you of crystal-clear connections. To keep your phone service trouble-free, we monitor the network 24 hours a day.

	COX Digital Telephone	U S West
Line 1	$11.75	$13.43
Line 2	$6.50	$13.43
Caller I.D.	$5.00	$5.95
Call Waiting	$4.00	$5.00
Voice Mail	$4.95	$6.95
Total	$32.20	$44.76

You Can Save 28% every month.
That adds up to more than $150 a year you'll save by switching to Cox!

Better Customer Service

Cox Communications is a company you can depend on for superior quality and award-winning service. You can expect the best, because that's our ongoing commitment to you. We schedule service calls to be as convenient for you as possible. And we give you an On-Time Guarantee that guarantees we will arrive within a 4-hour service window–if we don't, you will receive a $20 credit on your next bill.

Better Value

Save on your monthly line charge every month. And features like Call Waiting and Voice Mail are also less. If you would like a second line for a computer, fax machine or your teenager, you can get one for just $6.50 per month.

Long Distance

Cox Long Distance is simple and affordable. In-state and out-of-state calls (within the continental U.S.) are just 10¢ per minute, 24 hours a day. Plus, you'll have the convenience of a single phone bill.

Satisfaction Guaranteed

To make it even easier to enjoy the better choice, we guarantee your satisfaction. If you're not completely satisfied with Cox Digital Telephone service, we'll refund your first month's charges on your primary line (excluding local toll and long-distance charges

COX Digital Telephone

Call 1-888-333-2171

... and start saving today!

LOCAL EXCHANGE SERVICE

SECTION 1 - Definitions. cont'd.

Call Park: Allows a User to "park a call against their directory number within the business group and "unpark" the call from any other directory number. A business group consists of a series of Customer-defined telephone numbers.

Call Pickup: Allows a User to answer incoming calls to another Station line within a defined call pickup group. Call Pickup is provided as either Group Call Pickup, where predesignated groups can pickup each other's calls by activating an access code or a feature key, or Directed Call Pickup, where any call can be retrieved by dialing a different access code followed by the extension number.

Call Trace: Allows a Customer who has been receiving harassing or annoying phone calls to have the number of the caller recorded for follow-up by appropriate law enforcement agencies.

Call Transfer/Consultation/Conference: Provides the capability to transfer or add a third party, using the same line.

Call Waiting: Provides the User with a burst of tone to indicate that another call is waiting. The second call can either be answered by flashing the switchhook or hanging up the phone and being rung back by the caller.

Call Waiting Cancel: Allows a User to cancel the Call Waiting feature on a per call basis by dialing a specific two digit code.

Calling Number Delivery (Caller ID): Identifies the 10-digit number of the calling party.

Calling Number Delivery Blocking: Blocks the delivery of the number to the called party on a per call basis.

Class of Service (COS): Used to prevent a Station from dialing certain codes and numbers.

Company: COX ARIZONA TELCOM. INC., which is the issuer of this tariff.

Combination Service: shall mean a residential Customer, who may qualify for discounts on the first and additional lines if the Customer also purchases either Cable Services or high speed internet access from a Cox Affiliated Company. The eligibility will continue so long as the Customer continues to purchase the either service from the Cox Affiliated Company.

Conference/Six-Way: The User can sequentially call up to five other people and add them together to makeup a six-way call.

ORIGINAL

3.1 Local Exchange Service, cont'd.

3.1.2 Local Line, cont'd.

2. Local Line Rates and Charges

A Local Line Customer will be charged applicable Non-Recurring Charges (NRCs), monthly Recurring Charges as specified in Sections 3.1.2.3.(a) and 3.1.2.3.(b) respectively

(a) Non-Recurring Charge	Res. ($)	Bus. ($)	Home Office ($)
Line Connection Charge[7] (per line)	40.00[1(a)]	50.00	50.00
Account Changes (per number change after first or per billing record change)	10.00	20.00	20.00
PIC-2 Change (per line - initial set-up)	N/C	N/C	N/C
after initial set-up*	5.00	5.00	5.00
Line Restoral Charge[8] (per line)	20.00	25.00	25.00

* Waive PIC change charge if Cox Long Distance is selected.

[7] A reduced charge of one-half the non-recurring rate is available for the initial connection of service for those eligible under Link Up America Assistance Plan. (See Section 6.1)

[1(a)] Initial connection of service charges will be waived.

[8] If service is temporarily interrupted for non-payment and payment is not received within 10 days following the interruption, the Company reserves the right to discontinue service. If service is discontinued and subsequently re-established charges apply as for a new installation of service.

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3.1 Local Exchange Service, cont'd.

3.1.2 Local Line Rates and Charges, cont'd.

(b)

Monthly Recurring Charges	Res.	Bus.	Home Office
Local Line - Line Charge			
Flat Rate	$13.00	30.00	30.00
Add'l lines	$13.00	30.00	30.00
Combination Svc.	$11.75	30.00	30.00
2nd line	$ 6.50	30.00	30.00
Add'l lines	$11.75	30.00	30.00

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SECTION 3 - Service Descriptions, cont'd.

3.1 Local Exchange Service, cont'd.

3.1.3 Local Trunk

Local Trunk(s) provide Business Customer with voice-grade communication channel(s) to the Customer's Private Branch Exchange (PBX) or Hybrid Key System. Local Trunks can be provisioned as either analog or digital and will be provided in the following manner:

1. **Local Trunk-Basic**
Local Trunk-Basic can be used to carry one-way outbound traffic, one-way inbound or two-way traffic.

(a) **One-Way Outbound**
Provides the Customer with a single analog connection which is restricted to carry outbound traffic only.

(b) **One-Way Inbound or Two-Way**
Provides the Customer with a single analog connection which can carry one-way inbound or two-way traffic.

Features: The following features are available:

Multiline Hunting
Serial Hunting
Distributed Line Hunting
Calling Number Delivery

(c) **Local Trunk-Basic Rates and Charges:**
A Local Trunk-Basic Customer will be charged applicable Non-Recurring Charges and monthly Recurring Charges as specified in Sections 3.1.3.1.(c).1 and 3.1.3.1.(c).2 respectively. Local Line charges are only offered on a flat rate service basis.

1. **Non-Recurring Charges**

Line Connection Charges (per Trunk)	$50.00

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SECTION 3 - Service Descriptions, cont'd.

3.1 Local Exchange Service, cont'd.

3.1.3 Local Trunk, cont'd.

(c) Local Trunk-Basic Rates and Charges, cont'd.

1. **Non-Recurring Charges, cont'd.**

Account Changes (Moves, Changes, Additions) (per change)	$50.00
Account Changes (Per Billing Record Change)	$20.00
Initial PIC-2 Change (per line) after initial set-up*	 N/C 5.00
Line Restoral Charge[10] (per trunk)	$25.00
Suspension of Service Restoral Charge (per trunk)	$25.00

(Applies for trunk restoral after Customer-initiated suspension.)

2. **Monthly Recurring Charges**

Local Trunk -Basic Charge (per trunk) Flat Rate	$35.00

* Waive PIC change charge if Cox Long Distance is selected.

[10] If service is temporarily interrupted and payment is not received within 10 days following the interruption, the Company reserves the right to discontinue service. If service is discontinued and subsequently re-established, charges apply as for a new installation of service.)

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SECTION 6 - PROMOTIONS

6.1 Promotions - General

From time to time the Company shall, at its option, promote subscription or stimulate network usage by offering to waive some or all of the nonrecurring or recurring charges for the Customer (if eligible) of a target service for a limited duration. Such promotions shall be made available to all similarly situated Customers.

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SECTION 7 - CUSTOMER SPECIFIC CONTRACTS

7.1 General

The Company may provide any of the services offered under this tariff, or combinations of services, to Customers on a contractual basis. The terms and conditions of each contract offering are subject to the agreement of both the Customer and Company. Such contract offerings will be made available to similarly situated Customers in substantially similar circumstances. Rates in other sections of this tariff do not apply to Customers who agree to contract arrangements, with respect to services within the scope of the contract.

Services provided under contract are not eligible for any promotional offerings which may be offered by the Company from time to time.

Contracts in this section are available to any other similarly situated Customer that places an order for such contract service within 90 days of the effective date of such contract service.

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Fishel Company The 1819 S 27 Av —— 233-0658
Frantek Inc 700 E Baseline Rd Tempe —— 820-0080

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GST TELECOM ARIZONA
400 E Van Buren St Phoenix
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202 E Earll Dr —— 604-6400
Interactive Telephone Network
4811 N 7 St —— 650-6006
Interlink Network Services 4747 N 7 St —— 241-3045

INTER-TEL NETSOLUTIONS INC

Iridium North America
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M ecommunications Corporation
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3838 N Central Av —— 650-1788
Midcom Of Arizona Inc.
1430 W Broadway A-140 Tempe —— 858-9433
Mountain Bell
Toll Free-Dial 1 & Then —— 800 244-1111
MOUNTAIN TELECOMMUNICATIONS
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...'V Sagebrush St Gilbert —— 545-0744
... chnology Services
... W University Dr Tempe —— 967-2027
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7625 E Camelback Rd Scottsdale —— 945-8000
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NCN Communications Inc 8222 S 48 St —— 431-9011
NEC Business Communications System West Inc
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PRICE CEILING EXAMPLES

Service Treated in Rate Case

Service	Current Monthly Rate	Proposed Monthly Rate	Proposed Price Ceiling
Residence Caller ID- Name & Number	$5.95	$6.95	$13.90*

*Price ceiling will be double the rate approved in the rate case.

Service Not Treated in Rate Case

Service	Current Monthly Rate	Proposed Price Ceiling
Stand-By Line	$17.00	$34.00

LOCAL EXCHANGE SERVICE

SECTION 4 - Promotional Offerings

4.1 Promotional Offerings

The Company, from time to time, may make promotional offerings of its services which may include waiving or reducing the applicable charges for the promoted service. The promotional offerings may be limited as to the duration, the date and times of the offerings and the locations where the offerings are made.

LOCAL EXCHANGE SERVICES

SPECIAL ARRANGEMENTS

4.1 CONTRACTS

The Company may offer customized service packages under special arrangements on a case by case basis. Service offered under this Tariff provision will be provided to Customers pursuant to contract. Unless otherwise specified, the regulations for such arrangements are in addition to the applicable regulations and prices in other sections of this Tariff.

4.2 PROMOTIONAL OFFERINGS

From time to time, the Company will introduce promotional offerings. The Company may offer services at a reduced rate, or offer incentives including gift certificates and coupons for promotional, market research or rate experimentation purposes.

4.3 MARKET TRIALS

The Company may offer service to test and evaluate service capabilities, implementation procedures, technical processes, etc., or for market research, including rate experimentation purposes. Such trials will be for a limited duration.

ORIGINAL

MISCELLANEOUS SERVICES

13.4 SPECIAL CONSTRUCTION - (Continued)

13.4.3 Termination Liability - (Continued)

13.4.3.2 The amount of the maximum termination liability is equal to the estimated amounts for:

1. Cost installed of the facilities provided including estimated costs for arrangements of existing facilities and/or construction of new facilities as appropriate, less net salvage. Cost installed includes the cost of:

    a) equipment and materials provided or used,

    b) engineering, labor and supervision,

    c) transportation, and

    d) rights of way;

2. license preparation, processing, and related fees;

3. tariff preparation, processing, and related fees;

4. cost of removal and restoration, where appropriate; and

5. any other identifiable costs related to the specially constructed or rearranged facilities.

13.4.3.3 The applicable liability method for calculating the unpaid balance of a term obligation is obtained by multiplying the sum of the amounts determined as set forth above by a factor related to the unexpired period of liability and the discount rate for return and contingencies. The amount determined pursuant to the above paragraphs shall be adjusted to reflect the redetermined estimate net salvage, including any reuse of the facilities provided. This product is adjusted to reflect applicable taxes.

13.5 TEMPORARY PROMOTIONAL PROGRAMS

13.5.1 The Company may establish temporary promotional programs wherein it may waive or reduce non-recurring charges, to introduce present or potential Customers to a service not previously received by the Customers. The Corporation Commission will be notified of such promotional programs.

13.6 NUMBER RETENTION

The following charge applies whenever a customer requests to retain a telephone number for future use. This allows a customer to request that a number be withheld from service and reserved for their use for more than 30 days.

	Non -Recurring Charge		Recurring Charge	
	Residence	Business	Residence	Business
Number retention, per telephone number	$30.00	$50.00	$4.25	$8.50

By: D. Craig Young, President
425 Woods Mill Road, Ste. 300
Town & Country, MO 63017

APPROVED FOR FILING
DECISION #: 59346

SECTION 4 - PROMOTIONAL OFFERINGS

4.1 Promotional Offerings: The Company, from time to time, may make promotional offerings to its service which may include waiving or reducing the applicable charges for the promoted service. The promotional offerings may be limited as to the duration, the date and times of the offerings and the locations where the offering are made.

4.2 *New Customer Promotion*

Beginning on the effective date of this tariff, and ending August 1, 1996, the Company will offer the following promotion to all new Local Exchange Service Customer who order the service during the promotional period.

(A) All new Customers who order three or more optional service features will receive a fourth optional feature at no charge.

(B) LCI will reduce the non-recurring and monthly recurring Local Line charge if the customer selects LCI as their long distance carrier for all intrastate and interstate long distance traffic.The monthly recurring Local Line Charge shall be reduced to $15.00 and the non-recurring charge shall be reduced to $20.00 for such customers.

ORIGINAL

4. Promotional Offerings

The Company, from time to time, may make promotional offerings of its services which may include waiving or reducing the applicable charges for the promoted service. The promotional offerings may be limited as to the duration, the date and times of the offerings and the locations where the offerings are made.

(D)

(D)

FOR FILING
DECISION #: N/A

7. PROMOTIONAL OFFERINGS

The Company may from time to time engage in special promotional service offerings designed to attract new customers or to increase existing customers awareness of a particular tariff offering. These offerings may be limited to certain dates, times and/or locations.

.8 SPECIAL CUSTOMER ARRANGEMENTS (SCA)

For special situations, rates for specialized services will be determined on a Special Customer Arrangement and specified by contract between the Company and the Customer.

SUMMARY OF ANNUAL REVENUE IMPACTS

SERVICE	REVENUE IMPACT
Residence Basic Exchange	$32,731,250
Business Basic Exchange	$ (385,034)
Market Expansion Line	$ 541,314
Long Distance Services	$ (459,110)
Directory Assistance	$18,261,316
Listings	$ 7,744,085
Custom Calling	$ 3,254,828
Screening Services	$ 6,291,917
Total	**$67,980,566**

PRICE/COST COMPARISON

Residence Basic Exchange

	Current Price	Proposed Price	TSLRIC Cost	Shared Cost	TSLRIC + Shared Cost
Support			Total Direct Cost	Network Support Cost	Direct + Network Cost
	$13.18	$15.68	$25.91	$1.70	$27.61

Introducing the N

DIME LINE®

Just dial 10-10-811
+1+area code+number
and pay only

10¢

per minute
24 hours a day, 7 days a week to anywhere in the U.S.,
30¢ minimum per call.

No more ~~$5~~ monthly fee!

Who do you want in your

NEW DimeLine 10-10-811 by VarTec Telecom®	VS. 10-10-321 by Telecom USA
Always 10¢ per minute*	WHO KNOWS?
3 minute minimum per call	20 minutes for any notable savings
24 hours	Different rates

Care to know what 10-10-321 really saves you over AT&T on an interstate call? Try only 1 cent per phone call below AT&T basic rates for peak, off peak and nights/weekend.† Basic rates are the highest residential rates of AT&T.

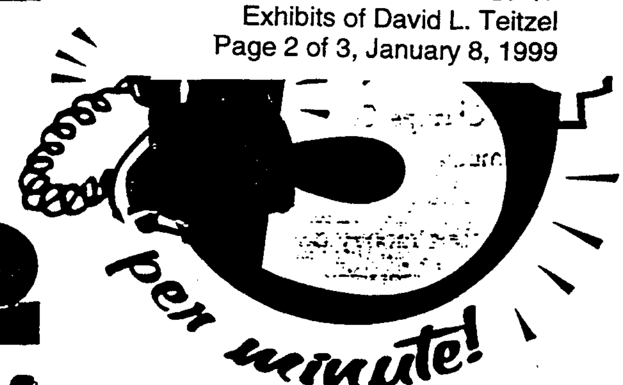
To save the 50% they advertise, you must talk *at least* 20 minutes per call. Our studies indicate that less than 15% of all calls made last 20 minutes or more. In reality, you are saving 50% off very few calls. Remember, that's 50% off an already high rate!

You pay different rates for calls at

TALK CENTS™

Arizona Corporation Commission
U S WEST Communications - DLT-17
Exhibits of David L. Teitzel
Page 2 of 3, January 8, 1999

Domestic Long Distance for 5¢ per minute!



10-10-502

Dial the Code!

Dear Long Distance User:

Who would you like to talk to more often? You probably wish you had more time to talk to your family. Or to share what's new with your best frienc When you Dial the Code – 10-10-502 – your interstate* direct dialed calls will cost only 5¢ per minute through November 15, 1998 after which yo will pay our regular low rate of 7¢ per minute! These rates apply any time of the day, any day of the week. We make it simple. GUARANTEED!

And that's not all. With the Talk Cents™ "Take Five" Promotion, you can call to Australia, Belgium, Canada, France, Germany, Netherlands, Ne Zealand, Sweden, and the U.K. for only 5¢ per minute through November 15, 1998!

The Talk Cents™ program has already allowed our one million callers to complete long distance calls at super low rates. Through the "Take Five" Promotion, our already low rates have been dramatically reduced to offer you even more significant savings. Dial the Code – 10-10-502 – each time you make a long distance call, and talk is cheap. Simply Dial the Code.

Your Talk Cents™ charges will be included on the long distance portion of your local phone bill, so that you can pay with a single check. For a low monthly access fee of just $4.95, you can make an unlimited number of calls at these low rates, from your home or business.

Dial the Code!

10-10-502

+1+Area Code+Number

Sincerely,

Peter Smith

Peter Smith
Senior Vice President of Customer Service

P.S. Talk Cents™ also offers low international rates. See reverse for examples.

Incredibly low International Rates Too!

☎ **Unlimited calls** ☎ **You don't have to change long distance companies** ☎ **Just Dial the Code–10-10-502**

Talk Cents™ is brought to you by WorldxChange Communications, a global long distance company with a high-tech

Agent

Arizona Corporation Commission
U S WEST Communications - DLT-17
Exhibits of David L. Teitzel
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10 TALK℠

10¢ A Minute* Long Distance

************ ECRWSS ** C079
0342
ARIZONA TELEPHONE CUSTOMER
16014 N 58TH PL
SCOTTSDALE AZ 85254

Dear Local Telephone Customer,

Now you can talk as long as you want with the **10 Talk** low rate of just 10¢ a minute*! Save money 24 hours a day on unlimited long distance calls to all 50 states.

This inexpensive service is already working on your phone. ***Simply dial 1010-636 + 1 + area code + the number you wish to call.*** and start seeing the difference on every long distance minute. You don't need to sign up or notify anyone to start dialing 1010-636!

10 Talk service is available 24 hours a day.

- *No minimums, no monthly fee.*
- ***10 Talk*** *works 24 hours a day, seven days a week for interstate, intrastate and intralata calls.*
- *A low 20¢ surcharge per call.*
- *Service takes place on Clear Choice Communications' high-tech digital network.*
- *Billing is rendered by your local telephone company.*

Just dial 1010-636 before every U.S. long distance call!

Stick with **10 Talk** for 10¢ a minute long distance. Place the enclosed stickers on or near your phone and start saving today. If you ever have any questions about the **10 Talk** service, call our toll-free customer service number, 1-800-668-4872. Try **10 Talk** today. You can talk as long as you want and save money, too!

Sincerely,

K.R. Ball
Vice President Marketing
Clear Choice Communications

Check Out Our New International Rates!

We Participate
BBB CARE
A Customer Assistance Program of the Better Business Bureau

P.S. Remember, **10 Talk** lets you make long distance calls to all 50 states for just 10¢ a minute! Dial now – 1010-636 + 1 + area code + the number you wish to call.

Clear Choice communications

*All calls are subject to a 20¢ surcharge per call.
Clear Choice Communications is a division and a trademark of Vartec Telecom, Inc. 10 Talk is a service mark of VarTec Telecom, Inc.

TT-P1GE-L1

TALK TALK TALK TALK TALK

INTRALATA LONG DISTANCE SERVICE

MTS

	Current Per Minute Rate		Proposed Per Minute Rate		
	Day	E/N/W	Day	E/N/W	
Business		$0.2994	$0.2200	$0.2800	$0.2800
Residence	$0.3260	$0.1500	$0.2500	$0.1200	
Miscellaneous	$0.3000	$0.1620	$0.2800	$0.1200	

Annual Revenue Impact: ($3,811,178)

Speech/Hearing Impaired Discount:

Current: 35%

Proposed: 50%

Annual Revenue Impact: ($1,274)

Simple Value Calling Plan

	Current Per Minute Rate		Proposed Per Minute Rate		
	Peak	Off-Peak	Peak	Off-Peak	
Business		$0.19	$0.19	$0.19	$0.19
Residence	$0.25	$0.15	$0.22	$0.09	

Annual Revenue Impact: ($33,881)

Arizona Value Calling Plan I

Current Per Minute Rate	Proposed Per Minute Rate
$0.12	$0.09

5% Discount on Dial Station-to-Station, Customer Dialed Calling Card Calls Placed Monday – Friday, 8 a.m. – 5 p.m.: No Change

Grandfather Service

Annual Revenue Impact: ($863,397)

INTRALATA LONG DISTANCE SERVICE (CONTINUED)

Arizona Value Calling Plan II

Monthly Rate: $19.20 (Includes 120 minutes)

Current Per Minute Rate Beyond 120 Minutes:

Day	$0.25
Evening/Night/weekend	$0.12

Proposal:

Eliminate Plan, Convert to Super Savings*

*Super Savings Calling Plan

	Per Minute Rate
Residence	$0.10

Annual Revenue Impact: ($56,148)

Business Daytime Connection Plus

Current Monthly Rate	Proposed Monthly Rate
$10.80	$8.40

Monthly Rate Includes 60 Minutes

Current Rate Beyond 60 Minutes	Proposed Rate Beyond 60 Minutes
$0.17/Minute	$.14/Minute

Annual Revenue Impact: ($240,897)

INTRALATA LONG DISTANCE SERVICE (CONTINUED)

Volume Discount Plans

Plan	Minimum MTS Usage	Discount
1	$ 25.00	10%
2	$ 50.00	15%
3	$ 100.00	20%
4	$ 200.00	25%
	$ 500.00	30%
	$1,000.00	35%

Proposal: Eliminate Plans, Convert to MTS

Annual Revenue Impact: ($17,876)

MetroPac Calling Plan

Monthly Rate

$ 9.00 (Includes 180 Minute Call Allowance)
$16.20 (Includes 360 Minute Call Allowance)
$21.50 (Includes 540 Minute Call Allowance)
Each Additional Minute: $.124

Proposal: Grandfather Plan

Annual Revenue Impact: ($545)

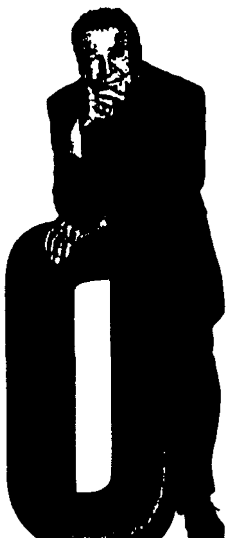
Operator Service Charges

	Current	**Proposed**
Calling Card (Mechanized)	$ .50	$ .80
Calling Card (Operator Assist)	$ .85	$2.25
Station (Partial Assist)	$1.30	$2.25
Station (Full Assist)	$1.30	$3.40
Person (Partial Assist)	$3.50	$4.90
Person (Full Assist)	$3.50	$6.05
Connect to DA	$1.50	$2.25
Busy Line Verify	$1.50	$3.00
Busy Line Interrupt	$3.00	$6.00

Annual Revenue Impact: $4,566,086

TOTAL ANNUAL REVENUE IMPACT: ($459,110)

eed To Find A Phone Number?



10-10-9000

America's Directory Assistance SM

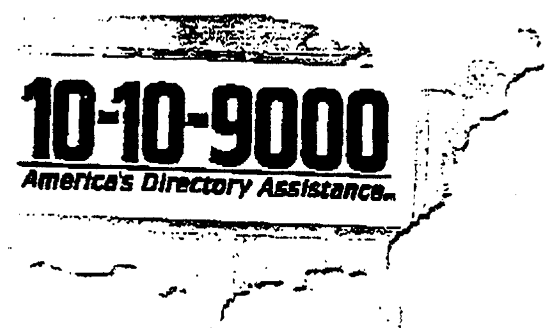
The Easy Way
A Phone Number

10-10-9000

America's Directory Assistance.

- ✔ Dial 10-10-9000 to get any phone listing in America
- ✔ No need to know area codes
- ✔ Just provide the name and city of the listing you need
- ✔ The operator will dial it for you with no connection charge*
- ✔ Two listings per call
- ✔ Fast, easy, friendly service

PEEL →



**Put this sticker on your phone
and save time finding phone numbers.**

*Low per-minute toll rates apply to connected calls. Service provided by MCI WorldCom.

wher

Introducing

AT&T 00 INFO

The assistance is back in Directory Assistance.

Problem: You need a phone number. But suppose you're not sure of either the exact name or location. Solution: New AT&T "00" INFO service. Even if you can't pin things down, one call to a helpful AT&T assistant can. After all, we want to find the number just as much as you do.

- Just dial "00" from home for local or long distance information.
- You never need an area code.
- Are you an AT&T customer? Then this exclusive service is already on your phone.

Why not give it a try?
Dial "00" today and get the assistance you need.

It's all within your reach. AT&T

Normal Directory Assistance charges apply.

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Introducing

AT&T 00 INFO

Dial 00 for a new kind of local and long distance information.

Try it now while it's free.

- AT&T customers for all directory assistance, just dial 00 from your home.
- You don't need the exact name, location, or even the area code.
- Also call to get free addresses and zip codes.
- We'll stay with you 'til you get everything you need.

The assistance is back in directory assistance.

Dial 00 today.

Free every weekend in February.

It's all within your reach AT&T

LISTING SERVICES

		Monthly Rate		Revenue
Type	Res/Bus	Present	Proposed	Impact
Premium				
Additional	Business	$3.00	$6.00	$1,601,154
	Residence*	$ .75	$1.50	$ 107,664
Alpha	Business	$3.00	$6.00	$ 9,798
Client Main	Business	$3.00	$6.00	$ 37,614
Foreign	Business	$3.00	$6.00	$ 542,567
	Residence*	$ .75	$1.50	$ 183
Informational	Residence*	$ .75	$1.50	$ 188
WATS	Business	$3.00	$6.00	$ 13,194
Mobile Radio	Business	$3.00	$6.00	$ 81
Mobile Unit	Business	$3.00	$6.00	$ 0
Internet				
E-Mail	Business	$3.00	$6.00	$ 87
	Residence	$1.50	$1.50	$ 0
URL	Business	$3.00	$12.00	$ 279
	Residence	$1.50	$12.00	$ 756
Privacy				
Nonpub	Business	$1.80	$3.00	$ 180,965
	Residence	$1.90	$3.00	$5,036,602
Nonlist	Business	$1.45	$2.00	$ 6,592
	Residence	$1.55	$2.00	$ 206,361

*Associated with Custom Solutions Package

TOTAL ANNUAL REVENUE IMPACT: $7,744,085

CUSTOM CALLING SERVICES

Residence Custom Calling

Service	Current Monthly Rate	Proposed Monthly Rate	Annual Revenue Impact
Caller ID-Name & Number	$5.95	$6.95	$3,172,971
Caller ID-Number	$5.50	$6.95	$ 7,167
U S WEST Receptionist With Caller ID-Name & Number	$10.95	$11.95	$ 111,709
U S WEST Receptionist With Caller ID-Number	$10.50	$11.95	$ 370

Annual Revenue Impact: $3,292,216

Business Custom Calling Services

Grandfather Business Custom Calling Packages found in Section 105.4.3, Pages 3-5 of the Exchange and Network Services Tariff filed with this rate case.

Annual Revenue Impact: ($37,388)

TOTAL ANNUAL REVENUE IMPACT: $3,254,828.

SCREENING SERVICES

Service	Current Monthly Rate	Proposed Monthly Rate	Current Nonrecurring Charge	Proposed Nonrecurring Charge
CustomNet				
MultiLine/Trunk	$0.25	$0.25	$371.00	$371.00
Indiv. Line				
Residence	$5.00	$0.25	$27.50	$12.50
Business	$5.00	$5.00	$27.50	$15.00
Annual Revenue Impact:	($336,654)			
Toll Restriction				
Residence	$0.00	$0.25	$6.00	$12.50
Business	$5.00	$5.00	$27.50	$15.00
Annual Revenue Impact:	$1,053,651			
Billed Number Screening				
Residence	$0.00	$0.25	$0.00	$12.50
Business	$0.00	$0.00	$0.00	$15.00
Annual Revenue Impact:	$4,093,353			
ScoopLine Access Restriction				
Withdraw Service				
900 Service Access Restriction				
Residence	$0.00	$0.25	$0.00	$12.50
Business	$0.00	$0.00	$0.00	$15.00
Annual Revenue Impact:	$1,461,984			
10XXX1+/10XXX011+ Blocking				
Residence	$.10	$0.25	$3.00	$12.50
Business	$.10	$0.10	$3.00	$15.00
Annual Revenue Impact:	$19,583			

TOTAL ANNUAL REVENUE IMPACT: $6,291,917

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF DAVID L. TEITZEL
STATE OF WASHINGTON COUNTY OF KING	) :)	SS

I, David L. Teitzel, of lawful age being first duly sworn, deposes and states:

1. My name is David L. Teitzel. I am Directory, Product and Market Issues for U S WEST Communications in Seattle, Washington.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

David L. Teitzel

David L. Teitzel

SUBSCRIBED AND SWORN to before me this 4th day of January, 1999.

Lee Annette Fortier

Notary Public

LEE ANNETTE FORTIER
COMMISSION EXPIRES 9-15-01
NOTARY PUBLIC
STATE OF WASHINGTON

My Commission Expires:

9/15/01

Arizona Corporation Commission
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Exhibits of David L. Teitzel
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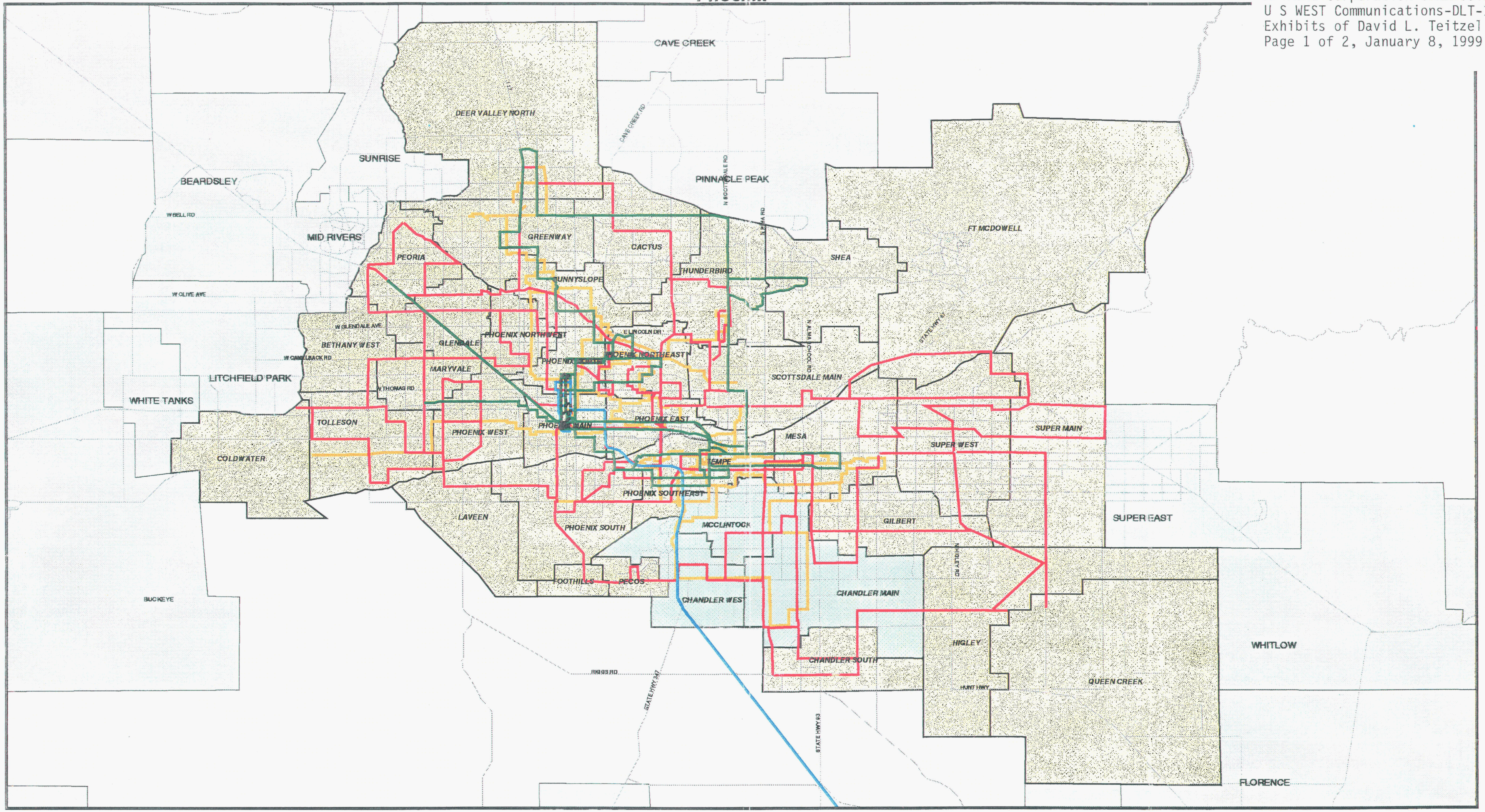
Phoenix



Competitive Fiber Routes
Phoenix, Arizona

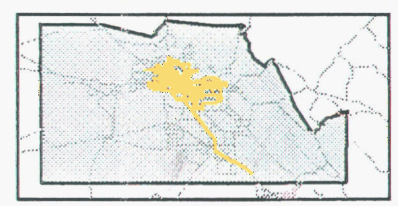
USWEST

3 0 3 6 Miles

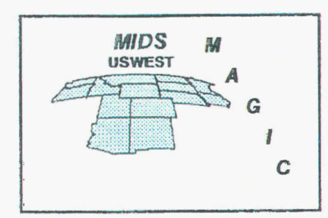
Source: Competitive fiber routes from Quality Strategies and US WEST competitive managers.

Legend
Worldcom
MCI
GST
ELI
AT&T/TCG
Highways

Residence/Business Competitive Zone
Business Competitive Zone



Phoenix MSA



12/4/98

Arizona Corporation Commission
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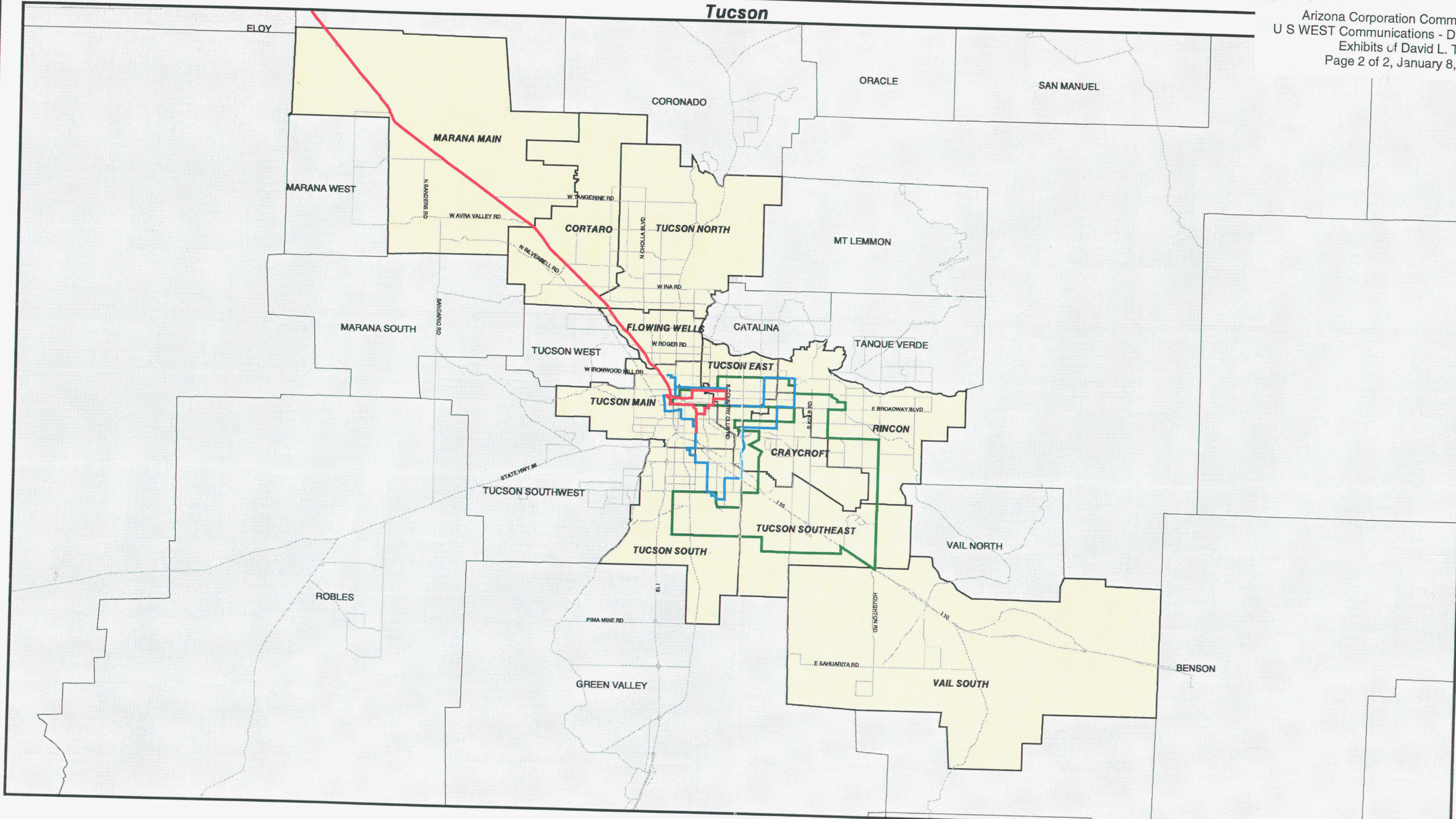

Competitive Fiber Routes
Tucson, Arizona

USWEST

4 0 4 8 Miles

Source: Competitive fiber routes from Quality Strategies and US WEST competitive managers.

Legend
Highway
Gst Fiber
Brooks Fiber
e.spire (formerly ACSI)
Business Competitive Zone

Tucson MSA

MIDS USWEST
M A G I C

12/4/98

ANNE KOEHLER-CHRISTENSEN

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

ANN KOEHLER-CHRISTENSEN

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

1. Current Responsibilities:

I am responsible for the contractual relationships between U S WEST Communications and U S WEST Dex. This involves all issues including Yellow Pages imputation.

2. Purpose of Testimony:

The purpose of my testimony is to demonstrate the value of the services provided to U S WEST Communications by U S WEST Dex and the current amount of fees booked to Account 5230, Directory Revenue in this test period. DEX continues to provide directory services to U S WEST at no cost to U S WEST or to U S WEST customers. In fact, the value of the services DEX provided to U S WEST in this test period exceeded the value provided in the 1984 test year referenced in the Settlement Agreement. I will also explain the reason fees paid by DEX have been reduced. In large measure, the fees have been reduced because U S WEST provides commensurately less to DEX than it has in the past. I demonstrate that the current booked fees and the value of services U S WEST receives from DEX are already reflected in the financial filings included in this rate case. Consequently, there is no need for any further adjustment to U S WEST's revenue requirement to reflect additional directory imputation.

3. Summary of Testimony:

DEX incurs all the costs of publishing and delivering directories to U S WEST customers. At the time of the Settlement Agreement DEX incurred these costs and DEX continues to incur these costs. The cost to DEX to publish and deliver directories has increased over the years from approximately $3.3 million to $15 million. However, the cost to U S WEST and to U S WEST customers was low in 1984 and is zero today.

The fees have decreased because the services provided under the Publishing Agreement are fewer and have less value today than previously. Both court decisions and federal legislation have contributed to the availability of listings and the ability of any publisher to publish directories in any market. This is a change in the publishing environment has drastically lowered the market value of publishing rights. U S WEST charges DEX market price for its listings and the Publishing Agreement between U S WEST and DEX reflects market conditions and values, since DEX has the same agreements with competitive Local Exchange Carriers as well as with independent Local Exchange Carriers.

U S WEST is receiving fees at a fair market rate for the full value of the services U S WEST provides to DEX. DEX continues to provide both White and Yellow Pages directories ("the services") at no cost to U S WEST or to U S WEST customers.

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Ann Koehler-Christensen. I am employed by U S WEST Communications as a manager in the Regulatory Finance organization. My business address is 1600 7^{th} Avenue, Room 3008, Seattle, Washington 98191.

Q. BRIEFLY OUTLINE YOUR EMPLOYMENT BACKGROUND.

A. My employment and educational background are shown on the WITNESS QUALIFICATION STATEMENT, Exhibit AKC-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to demonstrate the value of the services provided to U S WEST Communications ("U S WEST") by U S WEST Dex ("DEX") and the current amount of fees booked to Account 5230, Directory Revenue in this test period. DEX continues to provide directory services to U S WEST at no cost to U S WEST or to U S WEST customers. In fact, the value of the services DEX provided to U S WEST in this test period exceeded the value provided in the 1984 test year referenced in the Settlement Agreement. I will also explain the reason fees paid by DEX have been reduced. In large measure, the fees have been reduced because U S WEST provides commensurately less to DEX than it has in the past. I demonstrate that the current booked fees and the value of services U S WEST receives from DEX are already reflected in the financial filings included in this rate case. Consequently, there is no need for any further adjustment to U S WEST's revenue requirement to reflect additional directory imputation.

I. SERVICES

Q. WHAT SERVICES DID DEX PROVIDE UNDER THE TERMS OF THE PUBLISHING AGREEMENT IN 1984?

A. Under the terms of the Publishing Agreement in effect in 1984, DEX was obligated to publish and deliver White Pages directories to U S WEST customers at no charge to U S WEST or it's customers.

Q. ARE THESE THE SAME SERVICES PROVIDED IN THE CURRENT PUBLISHING AGREEMENT?

A. Yes. However, the current agreement also obligates DEX to deliver Yellow Pages directories at no charge to U S WEST or it's customers and also to offer complimentary Yellow Pages listings to each of U S WEST's business customers.

Q. WHAT IS THE APPROXIMATE VALUE OF THE SERVICES PROVIDED BY DEX TO U S WEST?

A. The cost of publishing the White Pages and of delivering the White and Yellow Pages to U S WEST customers between July 1997 and June 1998 was approximately $14.6 million.

Q. WHO INCURRED THESE COSTS DURING THE TEST YEAR?

A. All the costs were incurred by DEX and were not passed on to U S WEST.

Q. HOW IS THE BENEFIT REFLECTED IN U S WEST'S FINANCIAL STATEMENTS?

A. If DEX had not published and distributed Arizona directories to U S WEST's customers under the terms of the Publishing Agreement, U S WEST would have had to incur these costs. U S WEST would have incurred an additional $14.6 million in order to meet this obligation. This means that not only would U S WEST's expenses have been $14.6 million higher, the revenue requirement would have been approximately $14.6 million higher as well.

Q. HOW DID YOU DETERMINE DEX'S COST OF PUBLISHING AND DELIVERING ARIZONA DIRECTORIES?

A. First, I obtained manufacturing (paper and printing) and distribution (delivery) expense for each Arizona directory from DEX for the test period, July 1, 1997 through June 30, 1998.

Q. WERE DEX'S TOTAL MANUFACTURING AND DISTRIBUTION COSTS $14.6 MILLION FOR THE TEST PERIOD?

A. No, DEX's Arizona manufacturing and distribution costs for the test period were $35.4 million. To arrive at the $14.6 million, I went through several steps. Of DEX's Arizona directories published in the test period, three were separately bound White Pages books and four were separately bound Yellow Pages books. The remaining twenty directories were co-bound White and Yellow Pages directories. I obtained a count of the number of white pages and the number of yellow pages in each of these directories and I allocated the manufacturing expenses for each based on the proportion of white and yellow pages to arrive at White Pages manufacturing expense.

Q. DID YOU PERFORM ANY OTHER ALLOCATIONS?

A. Yes, because DEX directories include listings of customers of competitive and independent Local Exchange Carriers as well as of U S WEST customers, I further allocated the manufacturing costs as well as the distribution costs. I obtained the number of U S WEST listings and the number of non-U S WEST listings included in each of DEX's Arizona directories. I allocated the White Pages manufacturing costs to U S WEST based on the percentage of U S WEST customers published in each directory. I allocated the distribution costs in the same way. After performing these two allocations, I arrived at $14.4 million for White Pages manufacturing and White and Yellow Pages distribution costs for U S WEST customers.

Q. WHAT OTHER COSTS DID YOU INCLUDE?

A. Manufacturing expense includes only printing and paper costs. DEX has a work group responsible for preparing the White Pages for printing. DEX's costs for this work group were $920,000. Arizona's portion of this is approximately $200,000.

Q. HOW DOES THE VALUE OF THE SERVICES PROVIDED BY DEX TO U S WEST IN THIS TEST YEAR COMPARE TO THE VALUE OF THE SERVICES PROVIDED IN 1984?

A. I estimate the 1984 value at approximately $3.2 million. The level of detail is no longer available to allow me to restate the 1984 expenses as I have done for the test year. I've estimated the 1984 expenses by taking the same percentage of 1984 manufacturing and distribution expense as the $14.4 million is of the test year manufacturing and distribution expense. In 1984, as now, the cost to U S WEST was zero for manufacturing and distribution, although U S WEST did incur the costs to prepare camera-ready White Pages for printing. All the costs are now incurred by DEX and these costs have increased over fourfold. In this way, both U S WEST and U S WEST's customers receive the full value of high quality DEX directories without incurring any expense or risk. Under the terms of the Publishing Agreement, DEX continues to provide U S WEST customers with directories and DEX incurs all the risk of increased costs.

II. FEES

Q. THE DIRECTORY SETTLEMENT AGREEMENT USED THE 1984 RATE CASE DIRECTORY AMOUNT AS ITS BASIS. PLEASE EXPLAIN THE SOURCES OF THE $43 MILLION IN THAT CASE.

A. The $43 million in the 1984 test year consisted of $49.2 million of booked directory revenue [1] less $11.1 million of booked directory expense [2] plus a $4.9 million pro forma adjustment. The sum of these three equals $43 million.

Q. PLEASE DESCRIBE THE VARIOUS SOURCES OF THESE REVENUES.

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[1] Booked to Account 523, Directory Revenue. The equivalent account is now Account 5230.

[2] Booked to Account 630, Directory Expense. There is no equivalent account today.

A. The $49.2 million of directory revenues on U S WEST's 1984 Arizona books included revenues from several sources. These were:

- $28.3 million of the revenues from Publishing Fees paid by DEX
- $16 million of Yellow Pages advertising revenues sold to advertisers in 1983, but paid to U S WEST in 1984
- $4.9 million in revenues that were received from U S WEST customers for non-standard listings as well as from U S WEST listings sold to other publishers.

The $11.1 million in directory expenses on the books related to the 1983 directories for which U S WEST booked $16 million in revenues. In other words, there was a net revenue impact of $5 million that occurred in the transition year of 1984 that did not continue past that year. Finally, there was a pro forma adjustment made to reflect the increase in the Publishing Fees for 1985 that had already been negotiated.

Q. HOW DO THESE AMOUNTS COMPARE TO REVENUES RECEIVED IN THE TEST YEAR USED IN THIS CASE?

A. The total Account 5230, Directory Revenue, included in this test year is $18,462,936. There are no Yellow Pages revenues or expenses on U S WEST's books. 1984 was the last year that Yellow Pages advertising and Yellow Pages expense appeared on U S WEST's books. After the 1984 transition year, all Yellow Pages revenues and expenses, along with any risk, were incurred by DEX rather than by U S WEST. Regulated revenues paid by DEX have gone from $28.3 million in 1984 to $816,540 in the current test period. The revenues on U S WEST's books from non-standard listings and from listings sold to other directory publishers have grown from $4.9 million in 1984 to over $17 million in the current test year.

Q. WILL YOU PLEASE EXPLAIN THE REVENUES U S WEST RECEIVES FROM NON-STANDARD LISTINGS AND FROM OTHER DIRECTORY PUBLISHERS?

A. U S WEST sells non-standard White Pages listings to customers. These include listings such as additional listings, e-mail address listings, and privacy listings. U S WEST receives the revenue for these listings and DEX incurs the expense of publishing the extra listings and any special handling required of privacy listings, for example.

U S WEST also makes its subscriber listings available to all other publishers in addition to DEX. The revenues from the licensing of U S WEST's subscriber listings are included in these directory revenues and the benefit derived from this revenue is already reflected on U S WEST's books.

Q. WHAT DID U S WEST PROVIDE TO DEX IN RETURN FOR THE $28.2 MILLION IN PUBLISHING FEES IN 1984?

A. In 1984, the following services were provided by U S WEST to DEX under the Publishing Agreement:

- Negotiation of Yellow Pages heading information for DEX
- Access to U S WEST's Listings database
- Advanced List Service orders taken and provided to DEX to meet DEX directory closes
- Negotiation of directory delivery quantities
- Maintenance and provision of delivery routing information
- White Pages composition services and delivery of camera-ready White Pages to DEX
- Community Service Pages composition services and delivery of camera-ready pages to DEX
- Government Pages composition services and delivery of camera-ready pages to DEX
- Generic Phone Service Pages composition services and delivery of camera-ready pages to DEX
- Premium Phone Service Pages composition services and delivery of camera-ready pages to DEX
- Foreign Directory ordering services
- Use of Mountain Bell's name on Dex's directory covers (now U S WEST)

- Placement of DEX directories in U S WEST's Public Pay Stations
- Subscriber Lists
- U S WEST granted DEX the right to publish directories for U S WEST

Q. DOES U S WEST CONTINUE TO PROVIDE ALL THESE SERVICES TO DEX?

A. No, U S WEST only provides the last three items on the preceding list for DEX.

- Placement of DEX directories in U S WEST's Public Pay Stations
- Subscriber Lists
- U S WEST granted DEX the right to publish directories for U S WEST

Q. PLEASE EXPLAIN THE CURRENT PUBLIC PAY STATIONS ARRANGEMENT.

A. Public Pay Stations were deregulated in 1997. As a result, all revenues and expenses associated with Public Pay Stations have been removed from regulated tariffs. This removal of Public Pay Station is not related to the directory publishing agreements between U S WEST and DEX, but is simply another change that was necessary as a result of legal, regulatory and competitive changes in this industry.

Q. WHAT IS THE VALUE OF THE SUBSCRIBER LISTS U S WEST PROVIDES TO DEX?

A. DEX pays U S WEST market value for the subscriber lists. The test year revenues from DEX for Arizona subscriber lists are $816,540.

Q. HOW HAS A MARKET VALUE BEEN ESTABLISHED?

A. U S WEST has the same listings agreements with DEX as it has with approximately fifty publishers throughout its fourteen-state territory. U S WEST licenses Arizona listings to three independent publishers as well as to DEX. U S WEST charges all publishers the same licensing fees and provides the lists on the same terms and conditions.

Q. DOES DEX CONTINUE TO PAY U S WEST PUBLISHING FEES FOR THE RIGHT TO PUBLISH DIRECTORIES FOR U S WEST?

A. No, DEX compensates U S WEST by providing high quality White and Yellow Pages directories to U S WEST customers at no cost. DEX does not pay any additional fees to U S WEST for the right to publish directories that include U S WEST subscriber listings.

Q. PLEASE EXPLAIN WHY DEX NO LONGER PAYS U S WEST.

A. U S WEST can not grant exclusive publishing rights to any publisher because all publishers have the right to obtain and publish the listings of any local exchange carrier ("LEC"). In 1984, U S WEST was under no obligation to make its subscriber lists available to other publishers. In 1991, however, the Feist Decision [3] established that neither White nor Yellow Pages listings, nor Yellow Pages Headings could be copyrighted. This decision effected the publishing business in two ways. First, it meant that any publisher could obtain listings in order to publish directories, if not directly from the LEC, then by copying the listings from directories published by another publisher. This also had the effect of lowering the value of listings licensed from LECs. The Federal Telecom Act of 1996 now requires LECs to make their listings available to all publishers desiring access to the listings. These decisions have led to lower prices associated with the sale or licensing of subscriber listings and the right to publish directories.

[3] Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991)

Q. IS THERE ANY EVIDENCE OF A MARKET PRICE FOR THE RIGHT TO PUBLISH DIRECTORIES?

A. Yes, the market price is zero. DEX currently has publishing agreements with eleven competitive LECs and approximately one hundred independent LECs. Five of these eleven competitive LECs are certified to provide service in Arizona and eight of the independent LECs are Arizona LECs. Most of these publishing agreements are virtually the same as the publishing agreement between DEX and U S WEST. In other words, DEX does not pay publishing fees.

Q. ARE ALL THE PUBLISHNG AGREEMENTS WITH INDEPENDENT LECS THE SAME BASIC AGREEMENT?

A. Although DEX is in the process of updating its publishing agreements with independent LECs, DEX still has a few long-standing agreements that have not yet been replaced with the current format. DEX is in the process of updating contracts with all LECs so that the arrangements are all basically the same.

Q. DO OTHER PUBLISHERS PAY U S WEST FOR THE RIGHT TO PUBLISH U S WEST'S SUBSCRIBER LISTINGS?

A. No, U S WEST licenses its subscriber listings to fifty independent publishers. These publishers pay U S WEST the same licensing fees as DEX pays U S WEST for the subscriber lists, but they do not pay U S WEST publishing fees. Three independent publishers license Arizona listings, although at least eight publishers include U S WEST subscriber listings in directories they publish in Arizona. Basically, DEX does not pay publishing fees to publish their directories and other publishers do not pay publishing fees to U S WEST.

Q. DOES DEX PLACE U S WEST'S NAME ON THE FRONT OF ITS DIRECTORY COVERS?

A. Although DEX is under no obligation to place U S WEST's name on their directory covers, DEX has a relatively new policy to include on their covers the names of up to five LECs [4] with listings in the directory. U S WEST is one of the top five LECs for a majority of DEX directories.

Q. WHY DID DEX INSTITUTE THIS NEW POLICY?

A. Since mid-1988 DEX's policy has been to place only their own name on the covers of their directories. With the advent of local exchange competition, several competitive LECs attempted to have DEX include their names on the directory covers. When DEX declined, these LECs turned to regulators. The Montana Commission ordered DEX to place the names of local exchange carriers on the covers of their directories. To my knowledge, at least one other state commission had issued similar order that was under appeal. About the same time, DEX was also negotiating publishing agreements with several different competitive LECs. DEX revised their policy and committed to printing the names of up to five LECs on their directory covers.

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[4] DEX includes up to the top five local exchange carriers that have publishing agreements with DEX. The top five are selected by directory on the basis of the percentage of primary listings appearing in the directory.

Q. IS THERE VALUE TO DEX TO PLACE THE NAMES OF SEVERAL LOCAL EXCHANGE CARRIERS ON THEIR COVERS?

A. I suppose a case could be made that there is some value to DEX, but I believe a stronger case can be made that the value is greater for the LECs, including U S WEST, than it is to DEX.

Q. IF DEX ONLY RECENTLY STARTED INCLUDING LEC NAMES ON THEIR COVERS, WHAT DID DEX DO PREVIOUSLY?

A. From 1984 through mid-1988, DEX published their Arizona directories with Mountain Bell's name on the cover. U S WEST DIRECT (now DEX) was created in 1984 and their name was new and an unknown. The three telephone companies, Mountain Bell, Northwestern Bell and Pacific Northwest Bell, had name recognition. Although at divestiture these three companies combined to make up the new U S WEST RBOC, they retained their individual names and continued to do business with their established names and reputations. In this way, DEX was able to capitalize on both the name recognition and the business relationship that Mountain Bell had had with its Yellow Pages advertisers. Exhibit AKC-2 is a copy of a 1985 Phoenix Metro directory cover to illustrate the cover appearance between 1984 and mid-1988.

In mid-1988 DEX made the decision to publish its directories without Mountain Bell's name on the cover. By 1988, however, the U S WEST DIRECT name was well known and the publisher had established its own relationship with advertisers. Mountain Bell was still doing business as Mountain Bell, not U S WEST, however the directories were published with only the U S WEST DIRECT name on the cover. The Bell logo still appeared on the covers, but it should be understood that the Bell logo was owned by the parent company, U S WEST, Inc., not by Mountain Bell, nor the other two telephone companies. This style directory cover was used by DEX from mid-1988 into early 1997. Exhibit AKC-3 is a copy of a 1997 Prescott directory cover in this style.

In the fall of 1996, U S WEST DIRECT became U S WEST DEX. The name U S WEST DEX and it's new logo, the "your directory expert" detective with the magnifying glass were first used on the directory covers starting in 1997. At that time the Bell logo was dropped. In 1998 DEX began including LEC names on the cover in many locations, as I previously described. Exhibit AKC-4 is a copy of a current East Valley directory cover.

Q. SHOULD DEX COMPENSATE U S WEST FOR ITS U S WEST NAME ASSOCIATION?

A. No, DEX has established its own name recognition and no longer relies on its former or current relationship with U S WEST. This becomes apparent by viewing the changes in the cover formats from 1984 -1988 (AKC-2) to 1988 - 1997 (AKC-3) to the current cover format (AKC-4).

Q. WHAT ABOUT THE FACT THAT DEX HAS U S WEST IN ITS NAME?

A. DEX has as much right and ownership to the U S WEST part of their name as U S WEST Communications does. Over the last fifteen year, in fact, DEX has contributed greatly to the name recognition of U S WEST. There is no need for DEX to compensate U S WEST for a name that belongs to both companies as well as to other U S WEST companies.

Q. PLEASE SUMMARIZE WHY THE FEES PAID BY DEX ARE LOWER NOW THAN THEY WERE IN 1984.

A. Fees paid by DEX are lower now than they were in 1984 for two reasons. First, DEX receives fewer services from U S WEST under the current publishing agreement than in 1984, so the fees have been reduced. Second, changes in market and legal conditions have reduced the value of services provided by U S WEST under the Publishing Agreement.

Q. DOES U S WEST RECEIVE FULL VALUE IN FEES FOR THE SERVICES PROVIDED UNDER PUBLISHING AGREEMENTS TODAY?

A. Yes. DEX provides the same quality White and Yellow Pages directories to U S WEST's customers at no cost to U S WEST or its customers under the terms of a publishing agreement that is virtually the same as DEX has with many competitive and independent LECs. DEX pays U S WEST market rates for subscriber listings, as do many independent directory publishers. Mr. Redding has reflected all the fees and the benefit of the cost savings in the financials filed in this case.

III. CONCLUSION

Q. WHO INCURS THE COSTS OF PUBLISHING AND DELIVERING DIRECTORIES TO U S WEST CUSTOMERS?

A. DEX incurs all the costs of publishing and delivering directories to U S WEST customers. At the time of the Settlement Agreement DEX incurred these costs and DEX continues to incur these costs. The cost to DEX to publish and deliver directories has increased over the years from approximately $3 million to $15 million. However, the cost to U S WEST and to U S WEST customers was low in 1984 and is zero today.

Q. WHY HAVE THE FEES PAID BY DEX TO U S WEST DECREASED?

A. The fees have decreased because the services provided under the Publishing Agreement are fewer and have less value today than previously. Both court decisions and federal legislation have contributed to the availability of listings and the ability of any publisher to publish directories in any market. This change in the publishing environment has drastically lowered the market value of publishing rights. U S WEST charges DEX market price for its listings and the Publishing Agreement between U S WEST and DEX reflects market conditions and values, since DEX has the same agreements with competitive Local Exchange Carriers as well as with independent Local Exchange Carriers.

Q. IS AN ADDITIONAL IMPUTATION APPROPRIATE?

A. No. U S WEST is receiving fees at a fair market rate for the full value of the services U S WEST provides to DEX. DEX continues to provide both White and Yellow Pages directories ("the services") at no cost to U S WEST or to U S WEST customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

EXHIBITS OF

ANN KOEHLER-CHRISTENSEN

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

DESCRIPTION	EXHIBIT
WITNESS QUALIFICATION STATEMENT	AKC-1
1985 PHOENIX METRO DIRECTORY COVER	AKC-2
1997 PRESCOTT DIRECTORY COVER	AKC-3
1998 EAST VALLEY DIRECTORY COVER	AKC-4

WITNESS QUALIFICATION STATEMENT

NAME: Ann Koehler-Christensen

EMPLOYED BY: U S WEST Communications, Inc.

ADDRESS: 1600 7th Avenue, Room 3008, Seattle, Washington 98191

EDUCATION: Bachelor of Arts degree in German, University of Puget Sound, 1969

Master of Arts degree in Economics, New Mexico State University, 1994

WORK EXPERIENCE:

1970-1972	Service Representative, Business Office
1972-1988	Various Management positions in Accounting
1988-1996	Manager-Affiliated Interests, Public Policy
1996-Current	Manager-Regulatory Finance, Finance

PRINCIPLE DUTIES: Responsible for the analysis of information and contractual agreements concerning U S WEST's affiliated relationship with U S WEST Dex, Inc., including the imputation of revenues by regulatory commissions.

WITNESS EXPERIENCE: Issue: Directory

Arizona
Docket E-1051-93-183, Rebuttal Testimony filed 4/22/94

Idaho
Docket USW-S-96-5, Rebuttal Testimony filed 1/23/97

Iowa
Docket No. RPU-93-9, Direct Testimony filed 12/6/93
Docket No. RPU-93-9, Surrebuttal Testimony filed 2/23/94

Montana
Docket No. 90.12.86, Direct Testimony filed 1/15/92

New Mexico
Docket No. 92-227-TC, Rebuttal Testimony filed 1/26/93

Oregon
Docket UT 125, Direct Testimony filed 12/18/95
Docket UT 125, Reply Testimony filed 10/7/96

Utah

Docket 94-049-08, Direct Testimony filed 3/10/95
Docket 94-049-08, Rebuttal Testimony filed 8/25/95
Docket 97-049-08, Direct Testimony filed 3/18/97
Docket 97-049-08, Rebuttal Testimony filed 8/22/97
Docket 97-049-08, Surrebuttal Testimony filed 9/3/97

Washington

Docket UT-950200, Rebuttal Testimony filed 10/3/95
Docket UT-980948, Direct Testimony filed 10/16/98

Metro
Phoenix
Area Code 602

EMERGENCY
Police
Fire
Medical
911

Mountain Bell

September 1985

The White Pages

Published by
USWEST DIRECT©

Prescott
Bagdad • Chino Valley
Dewey • Humboldt • Mayer
Prescott Valley

Area Code 520
April 1997/1998

U S WEST DIRECT™

New!
Find complete local and national listings ▶ http://yp.uswest.com

The White & Yellow Pages

COMMUNITY PAGES
Events, Maps & ZIP Codes

GOVERNMENT PAGES
City, County, State & Federal Agencies

INDEX
Following The Yellow Pages

MONEY-SAVING COUPONS
At the Back of the Book

East Valley

Mesa • Tempe • Chandler

Ahwatukee, Apache Junction, Chandler Heights, Gilbert, Guadalupe, Higley, Palm Springs, Queen Creek, Sun Lakes, Superstition

September 1998/1999

Area Codes 520/602

US WEST Dex®

Your Directory Expert

The White Pages

Phone Service Pages
Information, tips & area codes

Government Pages
City, county, state & federal agencies

Business Listings
Following the residential listings

Complete Listings
Listings for all local telephone companies including:
U S WEST, Gila River Telecommunications, Inc., MCI, 1-800-RECONEX

http://uswestdex.com
Find complete local and national listings

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF ANN KOEHLER-CHRISTENSEN
STATE OF WASHINGTON	)	
COUNTY OF KING	)	
	) :)	SS

Ann Koehler-Christensen, of lawful age being first duly sworn, deposes and states:

1. My name is Ann Koehler-Christensen. I am a Regulatory Manager in the Finance Department of U S WEST Communications in Seattle, Washington.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Ann Koehler-Christensen

SUBSCRIBED AND SWORN to before me this 7th day of December, 1998.

Joyce A. Morris
Notary Public

JOYCE A. MORRIS NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES APRIL 11, 2002

My Commission Expires:

April 11, 2002 jm

NANCY HELLER HUGHES

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________ AFFIDAVIT OF NANCY HELLER HUGHES
STATE OF WASHINGTON	)	
COUNTY OF KING	)	
	) :)	SS

Nancy Heller Hughes, of lawful age being first duly sworn, deposes and states:

1. My name is Nancy Heller Hughes. I am an Executive Consultant of R. W. Beck, Inc., Seattle, Washington.

2. Attached hereto and made a part hereof for all purposes is my testimony consisting of pages 1 through 8, and my exhibits numbered NHH-1 through NHH-3.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Nancy Heller Hughes

Nancy Heller Hughes

SUBSCRIBED AND SWORN to before me this Seventh day of December 1998.

Jeanette M. Rud

Notary Public

My Commission Expires:

June 19, 2001

JEANETTE M. RUD COMMISSION EXPIRES NOTARY PUBLIC JUNE 19, 2001 STATE OF WASHINGTON

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

NANCY HELLER HUGHES

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX OF

NANCY HELLER HUGHES

EXECUTIVE SUMMARY

1. CURRENT RESPONSIBILITIES

Ms. Hughes is an Executive Consultant in the Seattle office of R. W. Beck, Inc. She is also an Accredited Senior Appraiser (ASA) in Public Utilities certified by the American Society of Appraisers. At R. W. Beck, Ms. Hughes is responsible for managing projects and performing studies involving utility rates and regulation, cost of service, depreciation and valuation.

2. PURPOSE OF TESTIMONY

Ms. Hughes' testimony presents the results of a study conducted by R. W. Beck to determine the estimated Reproduction Cost New Less Depreciation (RCNLD) of the Arizona plant in service of U S WEST Communications, Inc. (U S WEST) as of June 30, 1998.

3. SUMMARY OF TESTIMONY

The estimated RCNLD was developed using the same methodology used in previous RCNLD studies for U S WEST or its predecessor, Mountain States Telephone and Telegraph Company, which were accepted with approval by the Arizona Corporation Commission (ACC). The original cost of the property, by account and year of installation, was indexed to current cost using the U S WEST Telephone Plant Index prepared by Joel Popkin and Associates. This index represents the change in price levels from the date of investment to the date of valuation. Depreciation was deducted based upon estimates of life expectancy incorporated in U S WEST's proposed depreciation rates.

The total estimated reproduction cost new and reproduction cost new less depreciation value of the Arizona plant in service of U S WEST as of June 30, 1998 is shown below.

Reproduction Cost New	$5,896,742,092
Reproduction Cost New Less Depreciation	$3,064,125,056
Condition Percent	52%

IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Nancy Heller Hughes. I am an Executive Consultant in the Seattle office of R. W. Beck, Inc.. My business address is 1001 Fourth Avenue, Suite 2500, Seattle, Washington 98154-1004.

QUALIFICATIONS

Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND.

A. I graduated from the University of Chicago with a Bachelor's Degree in Business and Statistics in 1977. I received a Master's Degree in Business Administration at the University of Chicago in 1978. In addition, I have completed a series of depreciation courses taught by Depreciation Programs, Inc., Kalamazoo, Michigan.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.

A. I have worked as a consultant in the utilities industry for over twenty years specializing in utility rates and regulation. From 1977 to 1982, I was employed by Ernst and Whinney (now Ernst and Young) in Tacoma, Washington, as a management consultant in their telecommunications group. At Ernst and Whinney, I was responsible for the supervision and preparation of revenue requirement and rate design studies for telephone companies. I was also involved in numerous proceedings before the Federal Communications Commission (FCC), including Federal-State Joint Board proceedings examining jurisdictional cost separations procedures. This work involved the preparation of comments, briefs, and testimony on behalf of independent telephone companies and other common carriers.

In 1982, I joined R. W. Beck where I am responsible for conducting and analyzing revenue requirement, cost of service, and rate design studies for electric, gas, telephone, water, and solid waste utilities. A substantial part of my work involves depreciation and valuation issues. I have performed valuation and appraisal studies to determine the value of a wide range of utility property including electric, water, telephone, railroad, and solid waste landfill property. These studies have been performed in connection with the sale and acquisition of property, eminent domain cases, property tax issues, and utility rate cases. I have conducted analyses to determine the Original Cost Less Depreciation (OCLD) and Reproduction Cost New Less Depreciation (RCNLD) value of utility property, and determined the value of property based on the estimated future earning power of the property.

Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES?

A. Yes. I am an Accredited Senior Appraiser (ASA) in Public Utilities certified by the American Society of Appraisers.

Q. HAVE YOU TESTIFIED AS AN EXPERT WITNESS REGARDING UTILITY REVENUE REQUIREMENTS, RATES AND OTHER REGULATORY MATTERS?

A. Yes. I have testified as an expert witness before federal and state regulatory agencies, city councils, and courts of law. A record of my testimony is provided in Exhibit NHH-1 to my testimony.

Q. HAVE YOU TESTIFIED BEFORE THE ARIZONA CORPORATION COMMISSION (ACC) IN PRIOR UTILITY RATE PROCEEDINGS?

A. Yes. I testified on behalf of U S WEST Communications, Inc. (U S WEST) in Docket Nos. E-1051-91-004 and E-1051-93-183 regarding the RCNLD value of its Arizona properties.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of U S WEST.

ASSIGNMENT

Q. WHAT WAS YOUR ASSIGNMENT BY THE COMPANY IN THIS CASE?

A. R. W. Beck was requested by U S WEST to perform a study to estimate the RCNLD of its total plant in service located in the State of Arizona as of June 30, 1998. My testimony presents the results of that study.

Q. IS A COPY OF YOUR STUDY PROVIDED WITH YOUR TESTIMONY?

A. Yes. A copy of the study entitled "Reproduction Cost New Less Depreciation Study of the Properties of U S WEST Communications Located in the State of Arizona as of June 30, 1998" is provided in Exhibit NHH-2.

METHODOLOGY

Q. PLEASE DEFINE REPRODUCTION COST NEW LESS DEPRECIATION.

A. Reproduction cost new less depreciation (RCNLD) is defined as the cost of constructing an exact replica of the property at current price with the same or closely related materials, less accrued depreciation.

Q. WHAT GENERAL PROCEDURE DID YOU USE TO ESTIMATE THE RCNLD OF U S WEST'S ARIZONA PROPERTIES?

A. The trended original cost approach was used to estimate the RCNLD of U S WEST's Arizona properties. Under this approach, the original cost of the property, by account and year of installation, was indexed to current cost using a cost index that represents the change in price levels from the date of investment to the date of valuation. The trended costs are equal to the estimated reproduction cost new (RCN) of the property. The estimated RCNLD was then determined by subtracting an amount representing the accrued depreciation from the estimated RCN. The amount of accrued depreciation was developed based on the life expectancies and mortality characteristics reflected in U S WEST's proposed depreciation rates.

Q. HAS THE ACC APPROVED PREVIOUS VALUATION STUDIES PREPARED BY R. W. BECK ON BEHALF OF U S WEST?

A. Yes. The ACC has accepted the results of previous RCNLD valuation studies which R. W. Beck has prepared in connection with U S WEST rate filings, including RCNLD studies filed in U S WEST's last two rate cases.

Q. IN DETERMINING THE ESTIMATED RCNLD FOR THIS CASE, DID YOU USE THE SAME METHODOLOGY AS WAS USED IN PREVIOUS VALUATION STUDIES OF U S WEST PROPERTY?

A. Yes. The estimated RCNLD as of June 30, 1998 was developed using the same basic procedure and data that was used in previous RCNLD studies performed for U S WEST. The RCNLD study was performed using a computer model that R. W. Beck originally developed on behalf of the ACC in connection with a Mountain Bell rate case in 1971. In subsequent rate cases, Mountain Bell or U S WEST has retained R. W. Beck to determine the estimated RCNLD of its Arizona properties using the same methodology approved by the ACC.

ANALYSIS

Q. PLEASE DESCRIBE EXHIBIT NHH-2.

A. Exhibit NHH-2 is a copy of the final report prepared by R. W. Beck presenting the results of the RCNLD study of U S WEST's Arizona properties. The report provides a step-by-step description of the analyses performed, describes the source of data used in the analyses, and presents our opinion as to the RCN and RCNLD value of the properties. A detailed summary of the RCN and RCNLD value by plant account is provided in Table 1 of the report. The detailed output from the computer model is provided in Appendix A of the report.

Q. WHAT IS THE SOURCE OF THE ORIGINAL COST DATA USED IN THE RCNLD STUDY?

A. Vintaged plant data, i.e., the original cost of the property by year of installation, is needed when using the trended original cost approach to determine the RCN of the property. Vintaged original cost data for each plant account as of December 31, 1997 was available from U S WEST's Generation Arrangement Data File for Arizona. This data is used to support the depreciation rates prescribed by the ACC. The total original cost as of December 31, 1997 for each account is equal to the plant investment shown on U S WEST's MR2 financial report for Arizona.

To determine the original cost by vintage as of June 30, 1998, we relied on data from U S WEST's MR2 monthly financial report for Arizona. This report shows the additions, retirements, and reclassifications of plant by account that occurred during the first six months of 1998. However, it does not indicate the year for any retirements or reclassifications of plant. By definition, the vintage year for all additions on the MR2 is 1998, the year of placement. The age of plant that was retired during 1998 was determined based on the survivor curve and average service life for each account. Reclassifications during 1998 were distributed by vintage on the basis of the original cost data as of December 31, 1997. The vintaged data for the first six months of 1998 was then added to the vintaged plant data as of December 31, 1997. The total original cost as of June 30, 1998 for each account is equal to the plant investment shown on U S WEST's MR2 financial report for Arizona.

Q. WHAT COST INDICES WERE USED TO TREND THE ORIGINAL COST DATA TO REFLECT CURRENT COST?

A. The original cost of the property, by account and year of installation, was indexed to current cost using the U S WEST Telephone Plant Index (TPI) prepared by Joel Popkin and Associates, economic consultants. This index shows the change in cost over time for various types of telephone plant and equipment. A copy of the TPIs used in the study is provided in Appendix B of Exhibit NHH-2.

Q. HOW DID YOU DETERMINE THE AMOUNT OF DEPRECIATION RESERVE TO DEDUCT FROM THE RCN OF THE PROPERTY?

A. The amount of depreciation reserve to be deducted from the RCN was determined by applying a factor known as the "condition percent." The condition percent is defined as the ratio of the present depreciable value to the depreciable value of the plant when new. Thus, the condition percent when multiplied by the RCN gives the RCN less depreciation (i.e., RCNLD), whereupon the dollar amount of the depreciation reserve may be derived, if desired. A more detailed description of how the condition percent was determined is provided in Exhibit NHH-2.

The use of the condition percent is based on the principle that the value of a piece of property, as affected by all the physical and functional conditions that will ultimately force its retirement from service, depends upon the number of years it can reasonably be expected to give service in the future. To illustrate, if the life expectancy of an existing item of property is estimated to be 15 years but a consistent estimate of its life expectancy if it were new is 20 years, then the remaining service to be expected from the property is 15/20 or 75% of the service to be expected from a new item. On this basis, the present condition percent is 75%.

Q. HOW DID YOU DETERMINE THE LIFE EXPECTANCIES OF THE PLANT IN EACH ACCOUNT?

A. The life expectancies for each plant account were determined based on the survivor curves and average service lives incorporated in U S WEST's proposed depreciation rates for Arizona. A copy of the depreciation parameters used in the study is provided in Appendix C of Exhibit NHH-2. A survivor curve shows the percentage of each vintage, or group of plant placed in service during a single year, which is still surviving in service at a given age. Once the survivor curve is defined, the computer model calculates the life expectancies of the plant when new and at the date of valuation. The condition percent is then equal to the life expectancy of the plant at the date of valuation divided by the life expectancy of the plant when new.

CONCLUSION

Q. WHAT IS THE RCN AND RCNLD VALUE OF THE ARIZONA PROPERTIES OF U S WEST?

A. Based on the results of our study as described in this testimony and the study report provided in Exhibit NHH-2, the total estimated RCN and RCNLD value of the Arizona plant in service of U S WEST as of June 30, 1998 is shown below:

Reproduction Cost New..........................	$5,896,742,092
Reproduction Cost New Less Depreciation	$3,064,125,056
Condition Percent	52%

Q. HAVE YOU INCLUDED THE DETAILED CALCULATIONS SUPPORTING THIS DETERMINATION OF VALUE?

A. Yes. The detailed calculations supporting our determination of the RCN and RCNLD value are provided in Exhibit NHH-2.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF) U S WEST COMMUNICATIONS, INC., A) COLORADO CORPORATION, FOR A) HEARING TO DETERMINE THE EARNINGS) OF THE COMPANY, THE FAIR VALUE OF THE) COMPANY FOR RATEMAKING PURPOSES,) TO FIX A JUST AND REASONABLE RATE OF) RETURN THEREON AND TO APPROVE RATE) SCHEDULES DESIGNED TO DEVELOP SUCH) RETURN)	DOCKET NO. ____________

EXHIBITS OF

NANCY HELLER HUGHES

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS OF

NANCY HELLER HUGHES

Record of Testimony
Submitted by
Nancy Heller Hughes

Utility	Proceeding	Subject of Testimony	Before	Client	Date
1. Anchorage Telephone Utility	Docket U-80-42	Access Charge Cost of Service and Rate Design	Alaska Public Utilities Commission	Municipality of Anchorage	3-81
2. Washington Natural Gas Company	Cause No. U-84-60	Revenue Attrition	Washington Utilities and Transportation Commission	Commission Staff	12-84
3. El Paso Electric Company	Docket No. ER86-368	Depreciation	Federal Energy Regulatory Commission	Imperial Irrigation District	8-86
4. System Energy Resources, Inc.	Docket No. ER82-616-030	Depreciation	Federal Energy Regulatory Commission	City Council of New Orleans	3-87
5. Sierra Pacific Power Company	Docket No. 86-557	Depreciation	Public Service Commission of Nevada	Commission Staff	3-87
6. Duke Power Company	First Proceeding in Arbitration	Depreciation, Purchased Capacity Rate	Mecklenberg County, North Carolina	North Carolina Municipal Power Agency No. 1, et al	11-87 2-88
7. Louisiana Power & Light Company	Docket No. CD-86-11	Depreciation	City Council of New Orleans	City Council of New Orleans	12-87 3-88
8. United Cities Gas Company	Docket No. 3799-U	Rate of Return and Capital Structure, Rate Design	Georgia Public Service Commission	U.S. Department of Defense	10-88
9. Alascom, Inc.	Docket No. U-87-25	Cost Allocation and Rate Design	Alaska Public Utilities Commission	U.S. Department of Defense	11-88
10. System Energy Resources, Inc.	Docket No. ER89-678	Decommissioning	Federal Energy Regulatory Commission	City of New Orleans	11-90 1-91
11. U S WEST Communications, Inc.	Docket No. E-1051-91-004	Reproduction Cost New Less Depreciation Study	Arizona Corporation Commission	U S WEST Communications, Inc.	1-91
12. El Paso Electric Company	Docket No. 9945	Cost Allocation and Rate Design	Public Utilities Commission of Texas	U.S. Department of Defense	5-91

**Record of Testimony Submitted By
Nancy Heller Hughes**

Utility	Proceeding	Subject of Testimony	Before	Client	Date
13. Georgia Power Company	Docket No. 4007-U	Depreciation, Decommissioning, Cost Allocation and Rate Design	Georgia Public Service Commission	U.S. Department of Defense	8-91
14. Pacific Gas and Electric Company	Case No. 393325-6	Street Light Condemnation	Superior Court of the State of California, County of Fresno	City of Fresno, California	9-91
15. Pacific Gas and Electric Company	Case No. 213069	Street Light Condemnation	Superior Court of the State of California, County of Kern	City of Bakersfield, California	3-92
16. Washington Natural Gas Company	Docket No. UG-920840	Revenue Attrition	Washington Utilities and Transportation Commission	Commission Staff	4-93
17. Jess Ranch Water Company	Application 92-01-034	Certificate of Public Convenience and Necessity	California Public Utilities Commission	Town of Apple Valley, California	4-93
18. U S WEST Communications, Inc.	Docket No. E-1051-93-183	Reproduction Cost New Less Depreciation Study	Arizona Corporation Commission	U S WEST Communications, Inc.	7-93
19. Chugach Electric Association	Docket No. U-93-15	Depreciation	Alaska Public Utilities Commission	Homer Electric Assn., Matanuska Electric Assn., and Alaska Electric Generation & Transmission Cooperative	8-93
20. Waste Management of Arkansas, Inc.	Case No. 93-0234	Landfill Condemnation	Circuit Court of Pulaski County, Arkansas	Arkansas State Highway Department	8-94
21. Southern California Edison	Case No. BC 093 146	Condemnation of Electric Distribution Plant	Superior Court of the State of California, County of Los Angeles	City of Azusa, California	2-95
22. Municipal Electric Authority of Georgia	Docket No. 7967-U	Authority to Provide Telecommunications Services	Public Service Commission State of Georgia	Municipal Electric Association of Georgia	11-97
23. Chugach Electric Association, Inc.	Docket No. U-97-107	Depreciation	Alaska Public Utilities Commission	Alaska Electric Generation & Transmission Cooperative	11-97

REPRODUCTION COST NEW LESS DEPRECIATION STUDY

Of the Properties of U S WEST COMMUNICATIONS Located in the State of Arizona

As of June 30, 1998

R·W·BECK

REPRODUCTION COST NEW LESS DEPRECIATION STUDY OF THE PROPERTIES OF U S WEST COMMUNICATIONS LOCATED IN THE STATE OF ARIZONA

AS OF JUNE 30, 1998

INTRODUCTION

The Arizona Corporation Commission requires a utility to provide a calculation of its fair value rate base whenever it makes a rate filing. In past rate cases, the Arizona Corporation Commission has determined that the fair value of the plant investment included in rate base shall be equal to the average of the original cost less accrued depreciation and the reproduction cost new less depreciation (RCNLD) of the property in service. RCNLD is defined as the cost of constructing an exact replica of the property at current price with the same or closely related materials, less accrued depreciation. This report presents the results of our study to estimate the RCNLD of the Arizona plant in service of U S WEST Communications, Inc. (U S WEST) as of June 30, 1998.

The estimated RCNLD was developed using the same procedure, the trended original cost approach, that was used in previous RCNLD studies for U S WEST or its predecessor, Mountain States Telephone and Telegraph Company (Mountain Bell), which were accepted with approval by the Arizona Corporation Commission. Under this approach, the original cost of the property is indexed to current cost using a cost index that represents the change in price levels from the date of investment to the date of valuation. The amount of accumulated depreciation in the RCNLD study is computed based on the life expectancies and mortality characteristics used to calculate U S WEST's depreciation rates for each plant account.

ORIGINAL COST DATA

Original cost data as of December 31, 1997 by vintage for each plant account or sub-account was obtained from U S WEST's Generation Arrangement Data File for Arizona. This data is used to support the depreciation rates prescribed by the Arizona Corporation Commission. The original cost of the plant investment by year of placement is shown in Column B on the detailed output in Appendix A.

The total original cost as of June 30, 1998, shown in Column C on the output in Appendix A, was obtained from U S WEST's MR2A monthly financial report for Arizona. This report shows the additions, retirements, and reclassifications by plant sub-account that occurred during the first six months of 1998. However, it does not indicate the vintage for any retirements or reclassifications of plant. (The vintage year for all additions on the MR2A is 1998, the year of placement.) The age of plant that was retired during 1998 was estimated based on the survivor curve and average service life for each account. Reclassifications during 1998 were distributed on the basis of the original cost data by vintage shown in Column B for each account. The total original cost as of June 30, 1998 shown in Column C for each account is equal to the plant investment shown on U S WEST's MR2A financial report.

COST INDICES

The original cost of the property as of June 30, 1998 was indexed to current cost using the U S WEST Telephone Price Index (TPI) prepared by Joel Popkin and Company, economic consultants. This index shows the change in cost over time for various types of telephone plant and equipment. A copy of the TPIs used in the study is provided in Appendix B. The TPI for each plant account, by vintage, is also shown in Column D of the detailed output in Appendix B. These TPIs represent the average annual index for each year.

The cost indices in Column D were converted into translators in Column E by dividing the index at the date for which the RCN is desired, June 30, 1998, by the index for the year of placement. For example, on page 1 of Appendix A, which shows the calculation for motor vehicles – passenger cars, the index at June 30, 1998 is 116.7 while the index for the year 1984 is 92.0 This indicates, for example, that a car which cost $10,000 in 1984 would cost $12,680 on June 30, 1998, or (116.7 divided by 92.0) 1.268 times as much. This 1.268, which is shown in the line of Column E for 1984, is used to "translate" the dollars spent for a passenger car in 1984 into the cost of an equivalent passenger car at prices forecast to be in effect on June 30, 1998.

REPRODUCTION COST NEW

The reproduction cost new (RCN) of the plant investment shown in Column F of the detailed output was calculated by multiplying the original cost of the plant by vintage in Column C, by the corresponding translator in Column E. The average increase in cost for each account (RCN divided by original cost) is shown on the "total" line in Column E.

DEPRECIATION RESERVE

The amount of depreciation reserve to be deducted from the RCN was determined by applying a factor known as the "condition percent." The condition percent is defined as the ratio of the present depreciable value to the depreciable value of the plant when new. Thus, the condition percent when multiplied by the RCN gives the RCN less depreciation (RCNLD), whereupon the dollar amount of the depreciation reserve may be derived, if desired.

Mathematically, the condition percent is defined by the equation (N-X)/N, where N is equal to the probable average service life of the plant and X is equal to the age of the plant. Since by definition the probable average service life is equal to the age plus the life expectancy, the formula for determining the condition percent can be written as follows:

$$\text{Condition Percent} = \frac{\text{Life Expectancy at Age X}}{\text{Life Expectancy When New}}$$

The use of the condition percent is based on the principle that the value of a piece of property, as affected by all the physical and functional conditions that will ultimately force its retirement from service, depends upon the number of years it can reasonably be expected to give service in the future. To illustrate, if the life expectancy of an existing item of property is estimated to be 15 years but a consistent estimate of its life expectancy if it were new is 20 years, then the remaining service to be expected from the property is 15/20 or 75% of the service to be expected from a new item. On this basis, the present condition percent is 75%.

The calculation of the condition percent is shown in Columns G through J on the detailed output provided in Appendix A. Column G shows the average age of each plant vintage as of June 30, 1998. In calculating the average age, it was assumed that all plant was placed into service at the middle of the year. Thus, the average age of plant placed in service during 1978, for example, is equal to 20 years (June 30, 1998 minus June 30, 1978). Columns H and I show the estimated life expectancies for each vintage as estimated in the calculation of the prescribed depreciation rates. Column H shows the estimated life expectancy for new plant which is the reference point as new plant is, by definition, in 100% condition. Column I shows the estimated life expectancy for each plant vintage given its age as of June 30, 1998. The condition percent in Column J is equal to Column I divided by Column H.

The life expectancies shown in Columns H and I for each plant vintage were determined based on the survivor curves and average service lives proposed by U S WEST. A survivor curve shows the percentage of each vintage, or group of plant placed in service during a single year, which is still surviving in service at a given age. U S WEST uses Gompertz-Makeham type curves to describe the mortality characteristics of each plant account. With this type of curve, the specific shape of the curve is defined mathematically as a function of three factors, designated "C," "G," and "S" factors. The depreciation parameters used for each plant account are shown in Appendix C.

REPRODUCTION COST NEW LESS DEPRECIATION

The RCNLD value of the property shown in Column K for each account in Appendix A was calculated by applying the condition percent in Column J to the RCN value in Column F. The procedures described in this report were used in the computer model to determine the RCN and RCNLD, by plant account or sub-account, for all Arizona property of U S WEST for which vintage plant data was available. A summary of the output from the computer model is provided in Table 2 to this report.

The RCN value of land (Account 2111) and art works (Account 2122.2) was assumed to be equal to the original plant investment recorded on U S WEST's books as of June 30, 1998. TPIs were not available for these accounts and the nature of this plant does not lend itself to use of a trended cost approach. In addition, because land and art works are not depreciable plant accounts, there is no depreciation reserve. Thus, the RCNLD for land and art works is equal to the original cost of the plant.

Effective January 1, 1998, the Federal Communications Commission (FCC) raised the expense limit from $500 to $1000 for certain items of furniture and equipment required to be capitalized under the Uniform System of Accounts. The FCC also required companies to amortize the embedded net investment in this plant over a five-year period. In response to the FCC's order, U S WEST reclassified the net investment for embedded furniture, tools, and equipment into separate sub-accounts. The RCN for these embedded plant accounts were estimated based on the average telephone plant translator for plant installed in 1998 and prior years in the related primary accounts. The condition percent used to calculate the RCNLD for the embedded plant accounts is based on the book investment and reserve for these accounts as of June 30, 1998. The calculation of the RCN and RCNLD for embedded plant is shown in Table 3 to this report.

The RCNLD of nonregulated plant was assumed to be equal to the original cost less depreciation (i.e., net investment) recorded on U S WEST's books as of June 30, 1998. Over half of the nonregulated plant currently booked has been added in the last two years. Because the vintage of plant in the nonregulated accounts is relatively new, it is reasonable to assume that the RCNLD and OCLD values would be comparable. The RCN and RCNLD for nonregulated plant is shown in Table 4 to this report.

ASSUMPTIONS AND LIMITING CONDITIONS

This study was prepared at the request and for the use of U S WEST, and the conclusions, observations, and opinions contained herein constitute only the opinion of R. W. Beck. To the extent that information provided by U S WEST or prepared by others has been used in the preparation of this report, we have relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. The information was deemed reasonable for the purposes of this report.

The conclusions and opinions found in this report are made expressly to the following conditions and stipulations:

1. The vintage data contained in the Generation Arrangement Data File for Arizona as of December 31, 1997 prepared by U S WEST is assumed to be an accurate and acceptable estimate of the age distribution of the plant in service.
2. The U S WEST Telephone Plant Index prepared by Joel Popkin and Company, economic consultants, is assumed to be an accurate and reasonable indicator of the change in cost over time for various types of telephone plant and equipment.
3. The depreciation parameters proposed by U S WEST and used in the study are assumed to be accurate and acceptable.

OPINION OF VALUE

The total estimated RCN and RCNLD value of the Arizona plant in service of U S WEST as of June 30, 1998 is shown in the table below. This estimate is based on the limiting conditions and assumptions described in this report. A detailed summary of the RCN and RCNLD value by plant account is provided in Table 1.

	Value as of June 30, 1998
Reproduction Cost New	$5,896,742,092
Reproduction Cost New Less Depreciation	$3,064,125,056
Condition Percent	52%

We appreciate the opportunity to perform this valuation study for U S WEST Communications, Inc.

Respectfully submitted,

Table 1

US WEST COMMUNICATIONS, INC.

REPRODUCTION COST NEW LESS DEPRECIATION
TELEPHONE PLANT IN SERVICE
Company Proposed
As of June 30, 1998

	Original Cost	Reproduction Cost New	Depreciation	Reproduction Cost New Less Depreciation
Vintage Plant (1)	$4,462,764,222	$5,813,626,701	$2,793,774,121	$3,019,852,580
Land	10,159,484	10,159,484	0	10,159,484
Artwork	261,137	261,137	0	261,137
Embedded Plant (2)				
COE Accounts	0	0	0	0
Other Plant Accounts	36,790,280	29,802,533	19,747,879	10,054,654
Subtotal Embedded Plant	36,790,280	29,802,533	19,747,879	10,054,654
Unregulated and Other Plant (3)	42,892,236	42,892,236	19,095,036	23,797,201
Total Arizona Plant	$4,552,867,359	$5,896,742,092	$2,832,617,036	$3,064,125,056

(1) See Table 2
(2) See Table 3
(3) See Table 4

Table 2

US WEST COMMUNICATIONS, INC.

REPRODUCTION COST NEW LESS DEPRECIATION
VINTAGE PLANT
Company Proposed
As of June 30, 1998

Account	Description	Original Cost 6/30/98	Telephone Plant Translator	Reproduction Cost New	Condition Percent	Reproduction Cost New Less Depreciation
2112	Motor Vehicles	$55,684,341	1.099	$61,178,130	35.7%	$21,812,505
2114	Special Purpose Vehicles	25,794	1.217	31,401	83.3%	26,147
2115	Garage Work Equip	1,243,113	1.256	1,560,805	81.4%	1,271,170
2116	Other Work Equip	24,793,277	1.241	30,777,144	80.7%	24,840,071
2121	Buildings	156,969,244	2.118	332,430,782	61.4%	204,192,363
2122	Furniture	974,108	1.386	1,349,916	54.7%	738,230
2123	Company Comm Equip	6,616,540	0.964	6,376,987	46.7%	2,975,187
2124	Gen Purpose Computer	103,873,230	0.476	49,449,629	41.3%	20,433,728
2211	Analog SW Equip	193,225,467	0.912	176,255,349	81.4%	143,537,505
2212	Digital SW Equip	682,159,890	0.915	624,464,347	59.6%	372,462,435
2220	Operator Systems	8,619,634	1.040	8,962,972	10.7%	958,888
2231	Radio Systems	38,299,675	1.016	38,924,041	50.3%	19,592,061
2232	Circuit Equip	1,047,754,463	0.946	991,174,819	61.4%	608,588,271
2362	Other Term Equip	46,908,379	1.081	50,728,818	76.0%	38,538,027
2411	Pole Lines	44,148,770	4.513	199,258,373	15.7%	31,256,219
2421	Aerial Cable	159,883,370	1.865	298,172,235	41.7%	124,283,035
2422	Underground Cable	413,328,239	1.501	620,547,700	30.3%	188,300,207
2423	Buried Cable	1,141,678,856	1.447	1,652,190,587	49.6%	818,919,476
2424	Sub Cable	2,572	1.275	3,279	60.5%	1,984
2426	Intra Bldg Cable	39,956,114	2.120	84,724,836	36.5%	30,924,962
2431	Aerial Wire	7,728,621	1.400	10,823,662	70.2%	7,599,116
2441	Conduit Systems	288,890,525	1.988	574,240,889	62.4%	358,600,993
	Total Vintage Plant	$4,462,764,222		$5,813,626,701		$3,019,852,580

Table 3

US WEST COMMUNICATIONS, INC.

REPRODUCTION COST NEW LESS DEPRECIATION
EMBEDDED PLANT
Company Proposed
As of June 30, 1998

Account	Sub Code	Description	Original Cost 6/30/98	Telephone Plant Translator	Reproduction Cost New	Condition Percent	Reproduction Cost New Less Depreciation
2115	1264c	Garage Work Equipment	62,539	1.256	78,549	48.14%	37,813
2116	1564c	Other Work Equipment	7,900,862	1.241	9,804,969	58.03%	5,689,808
2122	2161c	Furniture	779,361	1.386	1,080,194	56.57%	611,023
2123.1	2261c	Office Equipment	1,125,912	1.028	1,157,438	35.32%	408,834
2123.2	124c, 114c	Comp Comm Equip	15,699,027	0.786	12,339,436	20.89%	2,577,735
2124	1361c	General Purpose Computers	11,222,578	0.476	5,341,947	13.65%	729,441
		Total Embedded Plant	$36,790,280	0.810	$29,802,533	33.74%	$10,054,654

Table 4

US WEST COMMUNICATIONS, INC.

REPRODUCTION COST NEW LESS DEPRECIATION
NONREGULATED AND OTHER ACCOUNTS
Company Proposed
As of June 30, 1998

Account	Sub Codes	Description	Original Cost 6/30/98	Telephone Plant Translator	Reproduction Cost New	Condition Percent	Reproduction Cost New Less Depreciation
2112	9464c	Motor Vehicles	$1,533,615	1.000	$1,533,615	93.01%	$1,426,430
2124	561c, 6361c	General Purpose Computers	99,807	1.000	99,807	91.11%	90,935
2212	9007c, 9277c, 9577c	Digital Electronic Switching	18,143,643	1.000	18,143,643	58.84%	10,675,727
2231	367c	Radio Systems	216,210	1.000	216,210	95.33%	206,120
2232	507c, 5257c, 6257c, 9057c	Circuit Equipment	7,196,452	1.000	7,196,452	92.98%	6,690,992
2311	9128c	Station Apparatus	2,502	1.000	2,502	41.28%	1,033
2351	9188c, 9288c, 9488c, 9788c, 9988c	Public Tel. Term. Equip.	15,693,462	1.000	15,693,462	29.95%	4,699,506
2422	5805c	Underground Cable	534	1.000	534	100.00%	534
2423	535c, 545c, 5845c	Buried Cable	5,897	1.000	5,897	98.52%	5,809
2441	504c	Conduit System	115	1.000	115	100.00%	115
		Total Nonregulated Plant	$42,892,236		$42,892,236	55.48%	$23,797,201

Appendix A
DETAILED OUTPUT BY PLANT ACCOUNT

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Motor Vehicles
Plant Sub-Account: Passenger Cars
Index Number: 2112
Field Code: MVA
Survivor Curve: 1
Probable Life: 7

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1984	40,630	40,630	92.0	1.268	51,534	14.00	7.00	0.00	0.00%	0
1985	9,585	9,585	94.0	1.241	11,894	13.00	7.00	0.00	0.00%	0
1986	88,638	88,638	96.5	1.210	107,220	12.00	7.00	0.00	0.00%	0
1987	242,371	242,371	98.8	1.182	286,392	11.00	7.00	0.00	0.00%	0
1988	709,373	708,888	100.0	1.167	827,273	10.00	7.00	0.50	7.14%	59,067
1989	692,366	686,338	102.7	1.136	779,588	9.00	7.00	0.50	7.17%	55,896
1990	345,944	339,325	104.5	1.117	378,906	8.00	7.00	0.57	8.19%	31,032
1991	229,917	226,064	108.0	1.081	244,371	7.00	7.00	0.85	12.19%	29,789
1992	17,078	16,923	110.4	1.057	17,883	6.00	7.00	1.35	19.32%	3,455
1993	0	0	113.2	1.031	0	5.00	7.00	2.04	29.18%	0
1994	0	0	116.2	1.004	0	4.00	7.00	3.00	42.89%	0
1995	0	0	117.6	0.992	0	3.00	7.00	4.00	57.17%	0
1996	0	0	118.6	0.984	0	2.00	7.00	5.00	71.46%	0
1997	0	0	117.3	0.995	0	1.00	7.00	6.00	85.75%	0
1998	0	98,051	116.7	1.000	98,051	0.25	7.00	7.00	100.03%	98,080
	2,375,902	2,456,812		1.141	2,803,111				9.89%	277,320

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Motor Vehicles
Plant Sub-Account:	Light Trucks
Index Number:	2112
Field Code:	MVB
Survivor Curve:	2
Probable Life:	8.5

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1980	10,442	10,442	73.4	1.590	16,602	18.00	8.50	0.00	0.00%	0
1981	0	0	83.6	1.396	0	17.00	8.50	0.50	5.88%	0
1982	29,857	29,855	88.4	1.320	39,413	16.00	8.50	0.54	6.33%	2,495
1983	167,842	167,783	90.4	1.291	216,596	15.00	8.50	0.59	6.90%	14,945
1984	1,841,541	1,839,088	92.0	1.268	2,332,843	14.00	8.50	0.66	7.80%	181,962
1985	49,118	48,949	94.0	1.241	60,770	13.00	8.50	0.78	9.13%	5,548
1986	93,464	92,850	96.5	1.209	112,286	12.00	8.50	0.93	10.94%	12,284
1987	770,339	762,711	98.8	1.181	900,895	11.00	8.50	1.13	13.30%	119,819
1988	4,340,495	4,286,840	100.0	1.167	5,002,743	10.00	8.50	1.39	16.29%	814,947
1989	6,415,592	6,330,591	102.7	1.136	7,193,573	9.00	8.50	1.70	20.00%	1,438,715
1990	4,798,381	4,738,412	104.5	1.117	5,291,605	8.00	8.50	2.08	24.51%	1,296,972
1991	5,898,958	5,836,930	108.0	1.081	6,307,127	7.00	8.50	2.54	29.92%	1,887,092
1992	4,423,105	4,388,244	110.4	1.057	4,638,660	6.00	8.50	3.09	36.33%	1,685,225
1993	4,433,825	4,414,255	113.2	1.031	4,550,738	5.00	8.50	3.73	43.84%	1,995,043
1994	2,266,038	2,266,038	116.2	1.004	2,275,789	4.00	8.50	4.50	52.94%	1,204,802
1995	282,559	282,559	117.6	0.992	280,397	3.00	8.50	5.50	64.71%	181,445
1996	5,450,641	5,450,641	118.6	0.984	5,363,320	2.00	8.50	6.50	76.47%	4,101,331
1997	3,915,208	3,915,208	117.3	0.995	3,895,181	1.00	8.50	7.50	88.24%	3,437,108
1998	0	1,864,835	116.7	1.000	1,864,835	0.25	8.50	8.50	100.00%	1,864,835
	45,187,405	46,726,231		1.077	50,343,371				40.21%	20,244,569

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Motor Vehicles
Plant Sub-Account: Heavy Trucks
Index Number: 2112
Field Code: MVC
Survivor Curve: 3
Probable Life: 10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1980	92,946	92,946	73.4	1.590	147,777	18.00	10.00	0.00	0.00%	0
1981	912,044	912,044	83.6	1.396	1,273,152	17.00	10.00	0.00	0.00%	0
1982	854,288	854,223	88.4	1.320	1,127,690	16.00	10.00	0.50	5.00%	56,384
1983	1,537,211	1,533,814	90.4	1.291	1,980,045	15.00	10.00	0.50	5.03%	99,596
1984	963,181	949,007	92.0	1.268	1,203,795	14.00	10.00	0.53	5.34%	64,283
1985	93,027	89,435	94.0	1.241	111,032	13.00	10.00	0.64	6.39%	7,095
1986	0	0	96.5	1.209	0	12.00	10.00	0.85	8.48%	0
1987	32,845	30,964	98.8	1.181	36,574	11.00	10.00	1.17	11.70%	4,279
1988	115,878	110,473	100.0	1.167	128,921	10.00	10.00	1.60	16.05%	20,692
1989	38,833	37,542	102.7	1.136	42,660	9.00	10.00	2.15	21.50%	9,172
1990	351,249	343,584	104.5	1.117	383,697	8.00	10.00	2.80	27.96%	107,282
1991	157,139	155,003	108.0	1.081	167,490	7.00	10.00	3.53	35.31%	59,141
1992	186,430	184,910	110.4	1.057	195,462	6.00	10.00	4.34	43.38%	84,792
1993	830,030	826,110	113.2	1.031	851,652	5.00	10.00	5.20	52.04%	443,200
1994	116,604	116,298	116.2	1.004	116,799	4.00	10.00	6.11	61.13%	71,399
1995	5,487	5,480	117.6	0.992	5,438	3.00	10.00	7.06	70.55%	3,836
1996	0	0	118.6	0.984	0	2.00	10.00	8.02	80.21%	0
1997	0	0	117.3	0.995	0	1.00	10.00	9.00	90.05%	0
1998	0	259,466	116.7	1.000	259,466	0.25	10.00	10.00	100.00%	259,466
	6,287,192	6,501,298		1.235	8,031,648				16.07%	1,290,616

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Special Purpose Vehicles
Plant Sub-Account: Special Purpose Vehicles
Index Number: 2114
Field Code: SPZ
Survivor Curve: 4
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1975	8	8	48.2	2.859	23	23.00	15.00	7.61	50.73%	12
1976	14	14	51.7	2.665	37	22.00	15.00	7.92	52.81%	20
1977	55	55	55.6	2.478	136	21.00	15.00	8.24	54.91%	75
1978	193	193	60.5	2.278	440	20.00	15.00	8.55	57.03%	251
1979	258	258	66.5	2.072	535	19.00	15.00	8.88	59.18%	316
1980	330	330	75.2	1.832	605	18.00	15.00	9.20	61.34%	371
1981	642	642	83.4	1.652	1,061	17.00	15.00	9.53	63.52%	674
1982	609	609	89.4	1.541	939	16.00	15.00	9.86	65.71%	617
1983	1,062	1,062	91.5	1.506	1,599	15.00	15.00	10.19	67.90%	1,086
1984	1,191	1,191	92.8	1.485	1,769	14.00	15.00	10.52	70.11%	1,240
1985	697	697	94.6	1.457	1,015	13.00	15.00	10.85	72.31%	734
1986	361	361	95.4	1.444	521	12.00	15.00	11.18	74.52%	389
1987	297	297	97.4	1.415	420	11.00	15.00	11.51	76.72%	322
1988	830	830	100.0	1.378	1,144	10.00	15.00	11.84	78.91%	903
1989	1,704	1,704	105.7	1.304	2,221	9.00	15.00	12.17	81.10%	1,802
1990	61	61	112.1	1.229	75	8.00	15.00	12.49	83.28%	62
1991	512	512	118.0	1.168	598	7.00	15.00	12.82	85.44%	511
1992	162	162	122.4	1.126	182	6.00	15.00	13.14	87.59%	160
1993	0	0	124.7	1.105	0	5.00	15.00	13.46	89.72%	0
1994	16,808	16,808	128.1	1.076	18,081	4.00	15.00	13.77	91.83%	16,604
1995	0	0	132.0	1.044	0	3.00	15.00	14.09	93.92%	0
1996	0	0	135.1	1.020	0	2.00	15.00	14.40	95.98%	0
1997	0	0	136.5	1.010	0	1.00	15.00	14.70	98.02%	0
1998	0	0	137.8	1.000	0	0.25	15.00	15.01	100.03%	0
	25,794	25,794		1.217	31,401				83.27%	26,147

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Garage Work Equipment
Plant Sub-Account: Garage Work Equipment
Index Number: 2115
Field Code: GWZ
Survivor Curve: 4
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1975	223	212	48.2	2.859	607	23.00	15.00	7.61	50.73%	308
1976	473	450	51.7	2.665	1,200	22.00	15.00	7.92	52.81%	634
1977	2,070	1,971	55.6	2.478	4,885	21.00	15.00	8.24	54.91%	2,682
1978	8,598	8,186	60.5	2.278	18,646	20.00	15.00	8.55	57.03%	10,634
1979	13,038	12,413	66.5	2.072	25,723	19.00	15.00	8.88	59.18%	15,223
1980	18,596	17,705	75.2	1.832	32,444	18.00	15.00	9.20	61.34%	19,901
1981	39,656	37,757	83.4	1.652	62,384	17.00	15.00	9.53	63.52%	39,626
1982	40,559	38,616	89.4	1.541	59,523	16.00	15.00	9.86	65.71%	39,112
1983	75,482	71,867	91.5	1.506	108,232	15.00	15.00	10.19	67.90%	73,489
1984	89,303	85,025	92.8	1.485	126,256	14.00	15.00	10.52	70.11%	88,518
1985	54,649	52,031	94.6	1.457	75,792	13.00	15.00	10.85	72.31%	54,805
1986	29,373	27,966	95.4	1.444	40,395	12.00	15.00	11.18	74.52%	30,103
1987	24,938	23,743	97.4	1.415	33,592	11.00	15.00	11.51	76.72%	25,772
1988	71,657	68,225	100.0	1.378	94,014	10.00	15.00	11.84	78.91%	74,186
1989	150,603	143,389	105.7	1.304	186,935	9.00	15.00	12.17	81.10%	151,604
1990	5,459	5,198	112.1	1.229	6,389	8.00	15.00	12.49	83.28%	5,321
1991	46,830	44,587	118.0	1.168	52,068	7.00	15.00	12.82	85.44%	44,487
1992	12,002	11,427	122.4	1.126	12,865	6.00	15.00	13.14	87.59%	11,268
1993	48,261	45,949	124.7	1.105	50,776	5.00	15.00	13.46	89.72%	45,557
1994	172,409	164,151	128.1	1.076	176,581	4.00	15.00	13.77	91.83%	162,154
1995	131,324	125,034	132.0	1.044	130,528	3.00	15.00	14.09	93.92%	122,592
1996	131,713	125,404	135.1	1.020	127,910	2.00	15.00	14.40	95.98%	122,768
1997	138,436	131,805	136.5	1.010	133,060	1.00	15.00	14.70	98.02%	130,426
1998	0	0	137.8	1.000	0	0.25	15.00	15.01	100.03%	0
	1,305,652	1,243,113		1.256	1,560,805				81.44%	1,271,170

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Other Work Equipment
Plant Sub-Account: Other Work Equipment
Index Number: 2116
Field Code: OWZ
Survivor Curve: 4
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1963	26	20	23.1	5.606	114	35.00	15.00	4.32	28.82%	33
1964	121	95	23.7	5.464	517	34.00	15.00	4.56	30.39%	157
1965	331	258	24.3	5.329	1,375	33.00	15.00	4.80	32.01%	440
1966	486	378	25.1	5.159	1,949	32.00	15.00	5.05	33.69%	657
1967	1,986	1,540	26.0	4.981	7,668	31.00	15.00	5.31	35.41%	2,715
1968	2,061	1,594	27.5	4.709	7,504	30.00	15.00	5.58	37.18%	2,790
1969	7,220	5,568	28.7	4.512	25,123	29.00	15.00	5.85	38.99%	9,795
1970	17,988	13,836	30.0	4.317	59,725	28.00	15.00	6.13	40.85%	24,398
1971	11,536	8,851	31.6	4.098	36,271	27.00	15.00	6.41	42.75%	15,506
1972	20,740	15,872	32.7	3.960	62,859	26.00	15.00	6.70	44.70%	28,098
1973	21,807	16,648	34.0	3.809	63,410	25.00	15.00	7.00	46.67%	29,593
1974	36,785	28,015	39.6	3.270	91,615	24.00	15.00	7.30	48.69%	44,607
1975	25,250	19,184	48.2	2.687	51,543	23.00	15.00	7.61	50.73%	26,148
1976	32,050	24,294	51.7	2.505	60,851	22.00	15.00	7.92	52.81%	32,136
1977	95,475	72,201	55.6	2.329	168,165	21.00	15.00	8.24	54.91%	92,339
1978	297,968	224,809	60.5	2.140	481,204	20.00	15.00	8.55	57.03%	274,430
1979	373,528	281,167	66.5	1.947	547,536	19.00	15.00	8.88	59.18%	324,032
1980	467,256	350,906	75.2	1.722	604,287	18.00	15.00	9.20	61.34%	370,670
1981	907,338	679,821	83.4	1.553	1,055,597	17.00	15.00	9.53	63.52%	670,515
1982	866,114	647,410	89.4	1.449	937,803	16.00	15.00	9.86	65.71%	616,230
1983	1,529,816	1,140,794	91.5	1.415	1,614,567	15.00	15.00	10.19	67.90%	1,096,291
1984	1,738,034	1,292,920	92.8	1.395	1,804,236	14.00	15.00	10.52	70.11%	1,264,950
1985	1,030,042	764,346	94.6	1.369	1,046,329	13.00	15.00	10.85	72.31%	756,601
1986	539,545	399,352	95.4	1.357	542,098	12.00	15.00	11.18	74.52%	403,971
1987	1,656,512	1,222,881	97.4	1.330	1,625,904	11.00	15.00	11.51	76.72%	1,247,394
1988	2,842,728	2,092,905	100.0	1.295	2,710,312	10.00	15.00	11.84	78.91%	2,138,707
1989	2,385,827	1,751,607	104.8	1.236	2,164,439	9.00	15.00	12.17	81.10%	1,755,360
1990	1,442,561	1,056,016	108.8	1.190	1,256,931	8.00	15.00	12.49	83.28%	1,046,772
1991	2,265,706	1,653,593	112.0	1.156	1,911,967	7.00	15.00	12.82	85.44%	1,633,585
1992	4,405,888	3,205,487	115.1	1.125	3,606,521	6.00	15.00	13.14	87.59%	3,158,952
1993	1,741,458	1,262,848	118.1	1.097	1,384,749	5.00	15.00	13.46	89.72%	1,242,396
1994	2,345,359	1,694,973	119.6	1.083	1,835,276	4.00	15.00	13.77	91.83%	1,685,334
1995	878,827	632,858	122.3	1.059	670,115	3.00	15.00	14.09	93.92%	629,372
1996	2,478,775	1,778,353	125.0	1.036	1,842,374	2.00	15.00	14.40	95.98%	1,768,311
1997	3,430,951	2,451,879	127.2	1.018	2,496,213	1.00	15.00	14.70	98.02%	2,446,788
1998	0	0	129.5	1.000	0	0.25	15.00	15.01	100.03%	0
	33,898,095	24,793,277		1.241	30,777,144				80.71%	24,840,071

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Buildings
Plant Sub-Account: Large Buildings
Index Number: 2121
Field Code: BUA
Survivor Curve: 5
Probable Life: 50

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	33,926	33,734	11.9	10.670	359,956	73.00	50.00	8.73	17.45%	62,812
1926	0	0	11.9	10.670	0	72.00	50.00	8.98	17.95%	0
1927	0	0	11.9	10.670	0	71.00	50.00	9.23	18.47%	0
1928	60,158	59,787	11.9	10.670	637,954	70.00	50.00	9.50	19.00%	121,211
1929	0	0	11.9	10.670	0	69.00	50.00	9.77	19.54%	0
1930	9,600	9,538	11.9	10.670	101,773	68.00	50.00	10.05	20.09%	20,446
1931	0	0	11.9	10.670	0	67.00	50.00	10.33	20.66%	0
1932	1,084	1,077	11.9	10.670	11,489	66.00	50.00	10.62	21.24%	2,440
1933	0	0	11.9	10.670	0	65.00	50.00	10.92	21.83%	0
1934	0	0	11.9	10.670	0	64.00	50.00	11.22	22.44%	0
1935	0	0	11.9	10.670	0	63.00	50.00	11.53	23.07%	0
1936	2,000	1,986	11.9	10.670	21,187	62.00	50.00	11.85	23.70%	5,021
1937	29,030	28,818	11.9	10.670	307,504	61.00	50.00	12.18	24.36%	74,908
1938	4,200	4,169	11.9	10.670	44,486	60.00	50.00	12.51	25.02%	11,130
1939	0	0	11.9	10.670	0	59.00	50.00	12.85	25.70%	0
1940	0	0	11.9	10.670	0	58.00	50.00	13.20	26.40%	0
1941	0	0	11.9	10.670	0	57.00	50.00	13.56	27.12%	0
1942	49,391	49,017	11.9	10.670	523,033	56.00	50.00	13.92	27.84%	145,612
1943	8,820	8,753	11.9	10.670	93,398	55.00	50.00	14.29	28.59%	26,703
1944	0	0	11.9	10.670	0	54.00	50.00	14.68	29.35%	0
1945	0	0	11.9	10.670	0	53.00	50.00	15.06	30.13%	0
1946	62,105	61,633	11.9	10.670	657,649	52.00	50.00	15.46	30.92%	203,345
1947	92,249	91,550	13.6	9.394	859,980	51.00	50.00	15.87	31.73%	272,872
1948	291,557	289,355	14.8	8.586	2,484,494	50.00	50.00	16.28	32.56%	808,951
1949	663,388	658,401	15.4	8.295	5,461,251	49.00	50.00	16.70	33.41%	1,824,604
1950	58,142	57,708	15.5	8.202	473,310	48.00	50.00	17.14	34.27%	162,203
1951	170,514	169,249	16.5	7.740	1,309,953	47.00	50.00	17.58	35.15%	460,448
1952	266,690	264,728	17.1	7.451	1,972,540	46.00	50.00	18.03	36.05%	711,101
1953	301,700	299,502	17.6	7.254	2,172,723	45.00	50.00	18.48	36.97%	803,256
1954	174,693	173,434	18.0	7.068	1,225,802	44.00	50.00	18.95	37.90%	464,579
1955	382,743	380,016	18.6	6.869	2,610,353	43.00	50.00	19.43	38.86%	1,014,383
1956	455,020	451,819	19.7	6.484	2,929,626	42.00	50.00	19.92	39.83%	1,166,870
1957	1,015,867	1,008,818	20.2	6.316	6,372,076	41.00	50.00	20.41	40.82%	2,601,081
1958	577,856	573,905	20.7	6.157	3,533,614	40.00	50.00	20.92	41.83%	1,478,111
1959	736,387	731,430	21.1	6.055	4,429,081	39.00	50.00	21.43	42.87%	1,898,747
1960	1,998,602	1,985,370	21.2	6.006	11,923,612	38.00	50.00	21.96	43.92%	5,236,850
1961	1,768,525	1,757,019	21.3	5.989	10,523,446	37.00	50.00	22.49	44.99%	4,734,498
1962	253,428	251,809	21.5	5.925	1,491,919	36.00	50.00	23.04	46.08%	687,476
1963	748,480	743,790	22.0	5.784	4,302,436	35.00	50.00	23.59	47.19%	2,030,319
1964	919,134	913,489	22.7	5.622	5,135,399	34.00	50.00	24.16	48.32%	2,481,425
1965	174,446	173,397	23.4	5.454	945,766	33.00	50.00	24.73	49.47%	467,870
1966	274,378	272,763	24.3	5.246	1,430,932	32.00	50.00	25.32	50.64%	724,624
1967	412,358	409,985	25.5	5.007	2,052,819	31.00	50.00	25.91	51.83%	1,063,976
1968	781,915	777,518	26.8	4.758	3,699,268	30.00	50.00	26.52	53.04%	1,962,092

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Buildings
Plant Sub-Account: Large Buildings
Index Number: 2121
Field Code: BUA
Survivor Curve: 5
Probable Life: 50

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	782,590	778,293	28.5	4.468	3,477,165	29.00	50.00	27.14	54.28%	1,887,405
1970	2,132,935	2,121,507	31.1	4.101	8,700,156	28.00	50.00	27.77	55.53%	4,831,197
1971	3,018,722	3,002,950	33.8	3.770	11,322,101	27.00	50.00	28.41	56.81%	6,432,085
1972	4,655,476	4,631,774	36.7	3.473	16,083,889	26.00	50.00	29.06	58.11%	9,346,348
1973	6,061,325	6,031,272	39.4	3.233	19,496,087	25.00	50.00	29.72	59.43%	11,586,525
1974	1,508,087	1,500,810	45.1	2.825	4,240,269	24.00	50.00	30.39	60.78%	2,577,236
1975	1,813,303	1,804,792	50.9	2.504	4,518,352	23.00	50.00	31.07	62.14%	2,807,704
1976	285,354	284,052	54.2	2.351	667,780	22.00	50.00	31.76	63.53%	424,241
1977	1,661,574	1,654,208	58.0	2.198	3,636,115	21.00	50.00	32.47	64.94%	2,361,293
1978	1,224,055	1,218,786	62.8	2.032	2,475,982	20.00	50.00	33.19	66.37%	1,643,309
1979	3,035,233	3,022,552	67.7	1.882	5,688,246	19.00	50.00	33.91	67.83%	3,858,337
1980	2,192,194	2,183,309	74.3	1.716	3,746,395	18.00	50.00	34.65	69.31%	2,596,626
1981	4,167,807	4,151,429	81.3	1.569	6,513,387	17.00	50.00	35.40	70.81%	4,612,130
1982	5,802,903	5,780,803	87.3	1.461	8,443,046	16.00	50.00	36.17	72.33%	6,106,855
1983	1,770,368	1,763,837	90.1	1.415	2,496,516	15.00	50.00	36.94	73.88%	1,844,426
1984	3,775,708	3,762,221	91.2	1.398	5,260,647	14.00	50.00	37.73	75.45%	3,969,158
1985	11,893,774	11,852,653	92.6	1.378	16,328,282	13.00	50.00	38.52	77.05%	12,580,942
1986	4,593,714	4,578,348	96.1	1.327	6,077,094	12.00	50.00	39.33	78.67%	4,780,850
1987	2,926,352	2,916,886	97.4	1.309	3,818,705	11.00	50.00	40.16	80.31%	3,066,802
1988	6,207,694	6,188,280	100.0	1.275	7,890,057	10.00	50.00	40.99	81.98%	6,468,269
1989	5,200,073	5,184,357	100.5	1.269	6,579,523	9.00	50.00	41.84	83.67%	5,505,087
1990	4,125,034	4,112,989	102.9	1.239	5,096,258	8.00	50.00	42.69	85.39%	4,351,695
1991	3,782,235	3,771,569	105.6	1.207	4,552,601	7.00	50.00	43.56	87.13%	3,966,681
1992	5,228,731	5,214,495	108.9	1.171	6,105,125	6.00	50.00	44.45	88.89%	5,426,845
1993	1,975,356	1,970,165	116.8	1.092	2,150,651	5.00	50.00	45.34	90.68%	1,950,210
1994	2,288,433	2,282,630	117.8	1.082	2,470,588	4.00	50.00	46.25	92.49%	2,285,047
1995	6,099,461	6,084,538	123.2	1.035	6,296,904	3.00	50.00	47.17	94.33%	5,939,870
1996	4,288,117	4,277,998	127.0	1.004	4,294,840	2.00	50.00	48.10	96.20%	4,131,636
1997	1,628,203	1,624,498	127.7	0.998	1,621,954	1.00	50.00	49.04	98.09%	1,590,974
1998	0	270,804	127.5	1.000	270,804	0.25	50.00	50.00	100.00%	270,804
	116,903,197	116,716,369		2.231	260,418,346				62.56%	162,930,554

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Buildings
Plant Sub-Account:	Other Buildings
Index Number:	2121
Field Code:	BUB
Survivor Curve:	6
Probable Life:	30

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1926	2,619	2,635	11.9	10.670	28,116	72.00	30.00	2.29	7.63%	2,145
1927	6,423	6,462	11.9	10.670	68,952	71.00	30.00	2.38	7.93%	5,468
1928	2,702	2,718	11.9	10.670	29,006	70.00	30.00	2.47	8.24%	2,390
1929	2,496	2,511	11.9	10.670	26,794	69.00	30.00	2.57	8.57%	2,296
1930	0	0	11.9	10.670	0	68.00	30.00	2.67	8.91%	0
1931	0	0	11.9	10.670	0	67.00	30.00	2.78	9.26%	0
1932	0	0	11.9	10.670	0	66.00	30.00	2.89	9.62%	0
1933	0	0	11.9	10.670	0	65.00	30.00	3.00	10.00%	0
1934	0	0	11.9	10.670	0	64.00	30.00	3.12	10.40%	0
1935	0	0	11.9	10.670	0	63.00	30.00	3.24	10.81%	0
1936	5,691	5,724	11.9	10.670	61,079	62.00	30.00	3.37	11.23%	6,859
1937	0	0	11.9	10.670	0	61.00	30.00	3.50	11.67%	0
1938	2,791	2,807	11.9	10.670	29,951	60.00	30.00	3.64	12.13%	3,633
1939	0	0	11.9	10.670	0	59.00	30.00	3.78	12.61%	0
1940	1,077	1,083	11.9	10.670	11,556	58.00	30.00	3.93	13.10%	1,514
1941	0	0	11.9	10.670	0	57.00	30.00	4.08	13.61%	0
1942	4,668	4,693	11.9	10.670	50,075	56.00	30.00	4.24	14.14%	7,081
1943	0	0	11.9	10.670	0	55.00	30.00	4.41	14.70%	0
1944	7,532	7,570	11.9	10.670	80,779	54.00	30.00	4.58	15.27%	12,335
1945	0	0	11.9	10.670	0	53.00	30.00	4.76	15.86%	0
1946	3,399	3,415	11.9	10.670	36,443	52.00	30.00	4.94	16.47%	6,002
1947	0	0	13.6	9.394	0	51.00	30.00	5.13	17.11%	0
1948	0	0	14.8	8.586	0	50.00	30.00	5.33	17.77%	0
1949	55,377	55,618	15.4	8.295	461,337	49.00	30.00	5.54	18.45%	85,117
1950	16,323	16,391	15.5	8.202	134,440	48.00	30.00	5.75	19.16%	25,759
1951	3,975	3,991	16.5	7.740	30,890	47.00	30.00	5.97	19.89%	6,144
1952	7,508	7,537	17.1	7.451	56,160	46.00	30.00	6.20	20.65%	11,597
1953	6,133	6,156	17.6	7.254	44,656	45.00	30.00	6.43	21.44%	9,574
1954	80,437	80,722	18.0	7.068	570,531	44.00	30.00	6.67	22.25%	126,943
1955	97,210	97,540	18.6	6.869	670,006	43.00	30.00	6.93	23.09%	154,704
1956	55,188	55,367	19.7	6.484	359,004	42.00	30.00	7.19	23.96%	86,017
1957	107,435	107,768	20.2	6.316	680,707	41.00	30.00	7.46	24.86%	169,224
1958	132,113	132,506	20.7	6.157	815,858	40.00	30.00	7.74	25.79%	210,410
1959	32,239	32,331	21.1	6.055	195,776	39.00	30.00	8.03	26.75%	52,370
1960	362,118	363,113	21.2	6.006	2,180,759	38.00	30.00	8.32	27.75%	605,161
1961	428,964	430,101	21.3	5.989	2,576,037	37.00	30.00	8.63	28.78%	741,384
1962	191,787	192,280	21.5	5.925	1,139,218	36.00	30.00	8.95	29.84%	339,943
1963	153,263	153,646	22.0	5.784	888,763	35.00	30.00	9.28	30.94%	274,983
1964	88,272	88,488	22.7	5.622	497,456	34.00	30.00	9.62	32.07%	159,534
1965	64,386	64,541	23.4	5.454	352,029	33.00	30.00	9.97	33.25%	117,049
1966	81,735	81,930	24.3	5.246	429,808	32.00	30.00	10.34	34.45%	148,069
1967	58,179	58,317	25.5	5.007	291,997	31.00	30.00	10.71	35.70%	104,243
1968	148,507	148,860	26.8	4.758	708,244	30.00	30.00	11.10	36.99%	261,979
1969	181,387	181,821	28.5	4.468	812,319	29.00	30.00	11.50	38.32%	311,281

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Buildings
Plant Sub-Account: Other Buildings
Index Number: 2121
Field Code: BUB
Survivor Curve: 6
Probable Life: 30

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1970	370,876	371,775	31.1	4.101	1,524,626	28.00	30.00	11.91	39.70%	605,276
1971	338,770	339,607	33.8	3.770	1,280,428	27.00	30.00	12.33	41.11%	526,384
1972	566,210	567,641	36.7	3.473	1,971,139	26.00	30.00	12.77	42.57%	839,114
1973	872,298	874,563	39.4	3.233	2,827,023	25.00	30.00	13.22	44.08%	1,246,152
1974	629,899	631,585	45.1	2.825	1,784,430	24.00	30.00	13.69	45.63%	814,235
1975	1,183,762	1,187,037	50.9	2.504	2,971,783	23.00	30.00	14.17	47.23%	1,403,573
1976	336,419	337,383	54.2	2.351	793,157	22.00	30.00	14.66	48.88%	387,695
1977	341,788	342,805	58.0	2.198	753,519	21.00	30.00	15.17	50.58%	381,130
1978	563,375	565,116	62.8	2.032	1,148,041	20.00	30.00	15.70	52.33%	600,770
1979	848,683	851,409	67.7	1.882	1,602,296	19.00	30.00	16.24	54.13%	867,323
1980	373,926	375,175	74.3	1.716	643,772	18.00	30.00	16.79	55.98%	360,384
1981	937,286	940,541	81.3	1.569	1,475,663	17.00	30.00	17.37	57.89%	854,261
1982	1,160,801	1,164,992	87.3	1.461	1,701,507	16.00	30.00	17.96	59.86%	1,018,522
1983	2,054,114	2,061,818	90.1	1.415	2,918,276	15.00	30.00	18.56	61.88%	1,805,829
1984	869,794	873,180	91.2	1.398	1,220,953	14.00	30.00	19.19	63.97%	781,044
1985	3,925,084	3,940,933	92.6	1.378	5,429,052	13.00	30.00	19.83	66.11%	3,589,146
1986	3,679,539	3,694,932	96.1	1.327	4,904,486	12.00	30.00	20.49	68.31%	3,350,255
1987	3,314,740	3,329,090	97.4	1.309	4,358,352	11.00	30.00	21.17	70.57%	3,075,689
1988	3,975,159	3,992,946	100.0	1.275	5,091,007	10.00	30.00	21.87	72.90%	3,711,344
1989	3,032,850	3,046,860	100.5	1.269	3,866,803	9.00	30.00	22.59	75.30%	2,911,702
1990	2,302,594	2,313,560	102.9	1.239	2,866,650	8.00	30.00	23.33	77.76%	2,229,107
1991	935,953	940,543	105.6	1.207	1,135,314	7.00	30.00	24.09	80.29%	911,544
1992	840,169	844,406	108.9	1.171	988,629	6.00	30.00	24.87	82.88%	819,376
1993	975,577	980,630	116.8	1.092	1,070,465	5.00	30.00	25.67	85.55%	915,783
1994	831,037	835,452	117.8	1.082	904,246	4.00	30.00	26.49	88.29%	798,358
1995	329,873	331,668	123.2	1.035	343,244	3.00	30.00	27.33	91.11%	312,730
1996	215,986	217,189	127.0	1.004	218,044	2.00	30.00	28.20	94.00%	204,961
1997	388,925	391,139	127.7	0.998	390,526	1.00	30.00	29.09	96.96%	378,654
1998	0	1,510,259	127.5	1.000	1,510,259	0.25	30.00	30.00	100.00%	1,510,259
	38,587,421	40,252,875		1.789	72,012,436				57.30%	41,261,809

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Furniture
Plant Sub-Account: Furniture
Index Number: 2122
Field Code: FEZ
Survivor Curve: 7
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent*	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1957	1,929	1,072	25.8	4.829	5,175	41.00	15.00	11.89	22.48%	1,163
1958	143	79	26.5	4.702	374	40.00	15.00	11.89	22.91%	86
1959	435	242	26.6	4.684	1,132	39.00	15.00	11.89	23.37%	264
1960	435	242	26.9	4.632	1,119	38.00	15.00	11.89	23.83%	267
1961	0	0	26.8	4.649	0	37.00	15.00	11.89	24.32%	0
1962	264	147	26.9	4.632	679	36.00	15.00	11.89	24.83%	169
1963	684	380	27.0	4.615	1,754	35.00	15.00	11.89	25.36%	445
1964	1,122	623	27.1	4.598	2,866	34.00	15.00	11.89	25.91%	743
1965	305	169	27.2	4.581	776	33.00	15.00	11.89	26.49%	206
1966	0	0	27.8	4.482	0	32.00	15.00	11.89	27.09%	0
1967	378	210	29.2	4.267	896	31.00	15.00	11.89	27.72%	248
1968	500	278	30.3	4.112	1,142	30.00	15.00	11.89	28.39%	324
1969	0	0	31.5	3.956	0	29.00	15.00	11.89	29.08%	0
1970	3,190	1,772	33.4	3.731	6,611	28.00	15.00	11.89	29.81%	1,971
1971	1,416	787	34.5	3.612	2,841	27.00	15.00	11.89	30.58%	869
1972	3,817	2,120	35.1	3.550	7,527	26.00	15.00	11.89	31.39%	2,363
1973	13,143	7,301	37.8	3.296	24,067	25.00	15.00	11.89	32.24%	7,759
1974	77,893	43,272	44.5	2.800	121,162	24.00	15.00	11.89	33.14%	40,149
1975	8,171	4,539	48.7	2.559	11,614	23.00	15.00	11.90	34.09%	3,959
1976	7,326	4,070	50.6	2.462	10,022	22.00	15.00	11.90	35.10%	3,517
1977	9,684	5,380	54.3	2.295	12,345	21.00	15.00	11.90	36.17%	4,465
1978	63,814	35,451	58.8	2.119	75,122	20.00	15.00	11.90	37.30%	28,023
1979	9,061	5,034	64.7	1.926	9,694	19.00	15.00	11.90	38.52%	3,734
1980	8,976	4,986	68.9	1.808	9,018	18.00	15.00	11.91	39.81%	3,590
1981	103,606	57,556	75.2	1.657	95,366	17.00	15.00	11.91	41.20%	39,290
1982	51,010	28,338	80.4	1.550	43,916	16.00	15.00	11.92	42.69%	18,747
1983	30,269	16,815	83.7	1.489	25,032	15.00	15.00	11.93	44.29%	11,087
1984	37,712	20,950	86.8	1.435	30,074	14.00	15.00	11.94	46.03%	13,842
1985	35,045	19,469	90.1	1.383	26,923	13.00	15.00	11.95	47.90%	12,897
1986	52,999	29,443	92.9	1.341	39,489	12.00	15.00	11.98	49.95%	19,724
1987	32,707	18,170	95.5	1.305	23,706	11.00	15.00	12.00	52.18%	12,370
1988	235,618	130,893	100.0	1.246	163,093	10.00	15.00	12.04	54.63%	89,099
1989	452,236	251,232	103.9	1.199	301,284	9.00	15.00	12.09	57.33%	172,728
1990	10,600	5,889	107.4	1.160	6,832	8.00	15.00	12.16	60.32%	4,121
1991	0	0	109.7	1.136	0	7.00	15.00	12.25	63.64%	0
1992	81,008	45,003	111.2	1.121	50,425	6.00	15.00	12.38	67.35%	33,963
1993	9,140	5,078	113.1	1.102	5,594	5.00	15.00	12.55	71.51%	4,000
1994	35,962	19,978	116.5	1.070	21,367	4.00	15.00	12.78	76.16%	16,273

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Furniture
Plant Sub-Account: Furniture
Index Number: 2122
Field Code: FEZ
Survivor Curve: 7
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent*	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1995	14,155	7,864	119.3	1.044	8,213	3.00	15.00	13.09	81.36%	6,682
1996	286,321	159,060	122.1	1.020	162,317	2.00	15.00	13.53	87.12%	141,412
1997	72,395	40,218	124.2	1.003	40,347	1.00	15.00	14.14	93.39%	37,682
1998	0	0	124.6	1.000	0	0.25	15.00	15.00	98.36%	0
	1,753,469	974,108		1.386	1,349,916				54.69%	738,230

* Condition percent equals 1 - (age/(age + life expectancy)) at 6/30/98.

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Office Equipment
Plant Sub-Account: Office Equipment
Index Number: 2123.1
Field Code: OEZ
Survivor Curve: 8
Probable Life: 10

Year of Placing (A)	Original Cost as of 12/31/97 (B)	Original Cost as of 6/30/98 (C)	Telephone Plant Index (D)	Telephone Plant Translator (E)	Reproduction Cost New (F)	Age as of 6/30/98 (G)	Life Expectancy When New (H)	Life Expectancy 6/30/98 (I)	Condition Percent (J)	Reproduction Cost New Less Depreciation (K)
1953	435	358	84.5	1.241	444	45.00	10.00	0.00	0.00%	0
1954	0	0	84.9	1.236	0	44.00	10.00	0.00	0.00%	0
1955	0	0	85.3	1.230	0	43.00	10.00	0.00	0.00%	0
1956	0	0	85.7	1.224	0	42.00	10.00	0.00	0.00%	0
1957	0	0	86.2	1.217	0	41.00	10.00	0.00	0.00%	0
1958	0	0	86.6	1.211	0	40.00	10.00	0.00	0.00%	0
1959	0	0	87.0	1.206	0	39.00	10.00	0.00	0.00%	0
1960	521	428	87.4	1.200	514	38.00	10.00	0.00	0.00%	0
1961	0	0	87.8	1.195	0	37.00	10.00	0.00	0.00%	0
1962	0	0	88.3	1.188	0	36.00	10.00	0.50	5.00%	0
1963	0	0	88.7	1.183	0	35.00	10.00	1.00	10.00%	0
1964	0	0	89.1	1.177	0	34.00	10.00	0.88	8.75%	0
1965	0	0	89.5	1.172	0	33.00	10.00	0.96	9.58%	0
1966	1,071	881	90.0	1.166	1,026	32.00	10.00	1.00	10.00%	103
1967	3,676	3,023	90.4	1.160	3,507	31.00	10.00	1.06	10.56%	370
1968	1,061	872	90.8	1.155	1,008	30.00	10.00	1.11	11.13%	112
1969	338	278	91.3	1.149	319	29.00	10.00	1.18	11.76%	38
1970	2,813	2,313	91.7	1.144	2,646	28.00	10.00	1.24	12.45%	329
1971	4,094	3,366	92.2	1.138	3,830	27.00	10.00	1.32	13.20%	506
1972	2,053	1,688	92.6	1.133	1,912	26.00	10.00	1.40	14.01%	268
1973	7,222	5,938	93.0	1.128	6,698	25.00	10.00	1.49	14.89%	997
1974	7,435	6,113	93.5	1.122	6,859	24.00	10.00	1.58	15.84%	1,086
1975	5,637	4,635	93.9	1.117	5,178	23.00	10.00	1.69	16.88%	874
1976	9,990	8,214	94.4	1.111	9,128	22.00	10.00	1.80	18.00%	1,643
1977	17,581	14,455	94.8	1.107	15,995	21.00	10.00	1.92	19.21%	3,073
1978	28,472	23,409	95.3	1.101	25,767	20.00	10.00	2.05	20.53%	5,290
1979	26,328	21,645	95.8	1.095	23,701	19.00	10.00	2.20	21.96%	5,205
1980	47,156	38,767	96.2	1.090	42,273	18.00	10.00	2.35	23.52%	9,943
1981	92,984	76,437	96.7	1.085	82,919	17.00	10.00	2.52	25.22%	20,912
1982	71,013	58,372	97.2	1.079	62,997	16.00	10.00	2.71	27.06%	17,047
1983	41,493	34,105	97.6	1.075	36,656	15.00	10.00	2.91	29.08%	10,660
1984	230,762	189,662	98.1	1.069	202,809	14.00	10.00	3.13	31.28%	63,439
1985	74,302	61,065	98.6	1.064	64,967	13.00	10.00	3.37	33.68%	21,881
1986	108,595	89,244	99.0	1.060	94,563	12.00	10.00	3.63	36.32%	34,345
1987	120,291	98,853	99.5	1.054	104,218	11.00	10.00	3.92	39.21%	40,864
1988	312,194	256,550	100.0	1.049	269,121	10.00	10.00	4.24	42.38%	114,054
1989	1,895,628	1,557,760	102.3	1.025	1,597,351	9.00	10.00	4.59	45.86%	732,545
1990	1,372,198	1,127,643	102.3	1.025	1,156,303	8.00	10.00	4.97	49.71%	574,798
1991	139,593	114,719	102.6	1.022	117,290	7.00	10.00	5.39	53.95%	63,278
1992	245,010	201,362	103.7	1.012	203,692	6.00	10.00	5.86	58.63%	119,424
1993	52,264	42,956	103.7	1.012	43,453	5.00	10.00	6.38	63.83%	27,736
1994	74,241	61,024	104.0	1.009	61,552	4.00	10.00	6.96	69.59%	42,834
1995	737,310	606,099	104.2	1.007	610,170	3.00	10.00	7.60	75.99%	463,668
1996	107,619	88,475	104.7	1.002	88,644	2.00	10.00	8.31	83.13%	73,690

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Office Equipment
Plant Sub-Account: Office Equipment
Index Number: 2123.1
Field Code: OEZ
Survivor Curve: 8
Probable Life: 10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1997	490,193	403,033	105.0	0.999	402,649	1.00	10.00	9.11	91.09%	366,773
1998	0	0	104.9	1.000	0	0.25	10.00	10.00	100.01%	0
	6,331,573	5,203,742		1.028	5,350,159				52.67%	2,817,784

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Company Communications Equipment
Plant Sub-Account: Stand Alone
Index Number: 2123.2
Field Code: OECA
Survivor Curve: 9
Probable Life: 7

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1982	52,546	104	98.0	0.682	71	16.00	7.00	0.00	0.00%	0
1983	386,573	764	102.7	0.650	497	15.00	7.00	0.50	7.14%	35
1984	722,017	1,419	94.4	0.708	1,004	14.00	7.00	0.51	7.26%	73
1985	731,612	1,371	85.3	0.783	1,074	13.00	7.00	0.54	7.67%	82
1986	842,021	1,286	86.8	0.770	989	12.00	7.00	0.60	8.62%	85
1987	749,950	622	86.7	0.770	480	11.00	7.00	0.72	10.32%	49
1988	1,124,573	1	100.0	0.668	1	10.00	7.00	0.90	12.89%	0
1989	805,238	-476	111.0	0.602	-287	9.00	7.00	1.15	16.44%	-47
1990	643,928	-481	114.5	0.583	-281	8.00	7.00	1.47	21.04%	-59
1991	400,183	-205	114.8	0.582	-119	7.00	7.00	1.87	26.77%	-32
1992	551,296	-30	100.7	0.663	-20	6.00	7.00	2.36	33.70%	-7
1993	5,101,584	2,380	96.7	0.691	1,644	5.00	7.00	2.93	41.84%	688
1994	2,450,990	2,327	83.0	0.805	1,872	4.00	7.00	3.58	51.19%	959
1995	519,032	700	80.0	0.835	585	3.00	7.00	4.32	61.74%	361
1996	590,954	980	69.1	0.967	947	2.00	7.00	5.14	73.44%	696
1997	0	0	68.1	0.981	0	1.00	7.00	6.03	86.21%	0
1998	0	0	66.8	1.000	0	0.25	7.00	7.00	100.00%	0
	15,672,497	10,761		0.786	8,457				34.10%	2,884

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Company Communication Equipment
Plant Sub-Account: PBX & Key Intrasystems
Index Number: 2123.2
Field Code: OECB
Survivor Curve: 10
Probable Life: 7

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1978	38,639	37,769	74.7	0.894	33,775	20.00	7.00	0.00	0.00%	0
1979	873	853	78.3	0.853	728	19.00	7.00	0.00	0.00%	0
1980	1,724	1,685	81.1	0.824	1,388	18.00	7.00	0.00	0.00%	0
1981	3,260	3,187	88.4	0.756	2,408	17.00	7.00	0.00	0.00%	0
1982	20,263	19,807	98.0	0.682	13,501	16.00	7.00	0.00	0.00%	0
1983	173,667	169,759	102.7	0.650	110,418	15.00	7.00	0.00	0.00%	0
1984	40,408	39,499	94.4	0.708	27,950	14.00	7.00	0.00	0.00%	0
1985	33,333	32,583	85.3	0.783	25,516	13.00	7.00	0.00	0.00%	0
1986	567,820	555,042	86.8	0.770	427,152	12.00	7.00	0.00	0.00%	0
1987	165	161	86.7	0.770	124	11.00	7.00	0.50	7.14%	9
1988	74,870	73,185	100.0	0.668	48,888	10.00	7.00	0.52	7.43%	3,632
1989	56,750	55,473	111.0	0.602	33,384	9.00	7.00	0.81	11.52%	3,846
1990	52,048	50,877	114.5	0.583	29,682	8.00	7.00	1.38	19.65%	5,832
1991	23,881	23,344	114.8	0.582	13,583	7.00	7.00	2.10	29.95%	4,068
1992	135,385	132,338	100.7	0.663	87,787	6.00	7.00	2.87	41.04%	36,028
1993	69,199	67,642	96.7	0.691	46,727	5.00	7.00	3.65	52.11%	24,349
1994	118,658	115,988	83.0	0.805	93,349	4.00	7.00	4.40	62.80%	58,623
1995	581	568	80.0	0.835	474	3.00	7.00	5.11	72.97%	346
1996	22,791	22,278	69.1	0.967	21,537	2.00	7.00	5.78	82.58%	17,785
1997	0	0	68.1	0.981	0	1.00	7.00	6.41	91.64%	0
1998	0	0	66.8	1.000	0	0.25	7.00	7.01	100.18%	0
	1,434,315	1,402,037		0.726	1,018,371				15.17%	154,519

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: General Purpose Computer
Plant Sub-Account: General Purpose Computer
Index Number: 2124
Field Code: GCZ
Survivor Curve: 11
Probable Life: 5

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1947	47,334	43,012	71.3	0.404	17,374	51.00	5.00	0.00	0.00%	0
1948	0	0	72.3	0.398	0	50.00	5.00	0.00	0.00%	0
1949	0	0	69.2	0.416	0	49.00	5.00	0.00	0.00%	0
1950	0	0	71.3	0.404	0	48.00	5.00	0.00	0.00%	0
1951	0	0	73.8	0.390	0	47.00	5.00	0.00	0.00%	0
1952	0	0	66.2	0.435	0	46.00	5.00	0.00	0.00%	0
1953	0	0	58.3	0.494	0	45.00	5.00	0.00	0.00%	0
1954	0	0	58.3	0.494	0	44.00	5.00	0.00	0.00%	0
1955	0	0	60.7	0.474	0	43.00	5.00	0.00	0.00%	0
1956	0	0	63.7	0.452	0	42.00	5.00	0.00	0.00%	0
1957	0	0	68.1	0.423	0	41.00	5.00	0.00	0.00%	0
1958	0	0	71.6	0.402	0	40.00	5.00	0.00	0.00%	0
1959	0	0	71.5	0.403	0	39.00	5.00	0.00	0.00%	0
1960	0	0	71.3	0.404	0	38.00	5.00	0.00	0.00%	0
1961	0	0	69.5	0.414	0	37.00	5.00	0.00	0.00%	0
1962	0	0	66.6	0.432	0	36.00	5.00	0.00	0.00%	0
1963	0	0	65.6	0.439	0	35.00	5.00	0.00	0.00%	0
1964	0	0	65.6	0.439	0	34.00	5.00	0.00	0.00%	0
1965	0	0	63.9	0.451	0	33.00	5.00	0.00	0.00%	0
1966	0	0	62.8	0.459	0	32.00	5.00	0.00	0.00%	0
1967	0	0	65.3	0.441	0	31.00	5.00	0.00	0.00%	0
1968	0	0	69.6	0.414	0	30.00	5.00	0.00	0.00%	0
1969	0	0	72.5	0.397	0	29.00	5.00	0.00	0.00%	0
1970	0	0	74.5	0.387	0	28.00	5.00	0.00	0.00%	0
1971	0	0	76.8	0.375	0	27.00	5.00	0.00	0.00%	0
1972	0	0	78.0	0.369	0	26.00	5.00	0.00	0.00%	0
1973	0	0	77.6	0.371	0	25.00	5.00	0.00	0.00%	0
1974	0	0	82.2	0.350	0	24.00	5.00	0.00	0.00%	0
1975	0	0	88.3	0.326	0	23.00	5.00	0.00	0.00%	0
1976	2,230	2,026	90.3	0.319	646	22.00	5.00	0.00	0.00%	0
1977	0	0	86.1	0.334	0	21.00	5.00	0.00	0.00%	0
1978	0	0	78.4	0.367	0	20.00	5.00	0.00	0.00%	0
1979	0	0	74.9	0.385	0	19.00	5.00	0.00	0.00%	0
1980	0	0	75.1	0.383	0	18.00	5.00	0.00	0.00%	0
1981	64,507	58,617	82.3	0.350	20,512	17.00	5.00	0.00	0.00%	0
1982	22,625	20,559	92.9	0.310	6,374	16.00	5.00	0.00	0.00%	0
1983	868,623	789,309	103.8	0.277	218,999	15.00	5.00	0.00	0.00%	0
1984	442,095	401,727	108.6	0.265	106,535	14.00	5.00	0.00	0.00%	0
1985	823,525	748,329	103.0	0.280	209,241	13.00	5.00	0.00	0.00%	0
1986	1,742,738	1,583,587	101.1	0.285	451,111	12.00	5.00	0.50	10.00%	45,111
1987	1,126,340	1,023,108	98.9	0.291	297,932	11.00	5.00	0.51	10.17%	30,300
1988	1,110,877	1,005,838	100.0	0.288	289,681	10.00	5.00	0.53	10.69%	30,967
1989	34,236,773	30,632,637	99.9	0.288	8,831,031	9.00	5.00	0.60	12.04%	1,063,256
1990	2,780,097	2,431,762	95.8	0.301	731,052	8.00	5.00	0.73	14.52%	106,149

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: General Purpose Computer
Plant Sub-Account: General Purpose Computer
Index Number: 2124
Field Code: GCZ
Survivor Curve: 11
Probable Life: 5

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1991	1,660,577	1,417,966	79.4	0.363	514,325	7.00	5.00	0.92	18.35%	94,379
1992	7,094,416	5,982,780	66.6	0.432	2,587,148	6.00	5.00	1.19	23.74%	614,189
1993	13,689,817	11,587,971	58.4	0.493	5,714,616	5.00	5.00	1.54	30.90%	1,765,816
1994	20,770,436	17,850,277	53.7	0.536	9,573,333	4.00	5.00	2.00	40.02%	3,831,248
1995	14,396,199	12,611,211	48.1	0.599	7,550,995	3.00	5.00	2.57	51.32%	3,875,171
1996	10,060,675	8,971,416	40.4	0.713	6,395,465	2.00	5.00	3.25	64.97%	4,155,133
1997	7,378,346	6,673,039	32.6	0.883	5,895,200	1.00	5.00	4.06	81.15%	4,783,955
1998	0	38,058	28.8	1.000	38,058	0.25	5.00	5.00	99.99%	38,054
	118,318,230	103,873,230		0.476	49,449,629				41.32%	20,433,728

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Analog Switching Equipment
Plant Sub-Account: Analog Switching Equipment
Index Number: 2211
Field Code: AEZ
Survivor Curve: 12
Probable Life: 33.34

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	1,686	1,690	55.3	1.667	2,817	73.00	33.34	0.00	0.00%	0
1926	0	0	55.3	1.667	0	72.00	33.34	0.00	0.00%	0
1927	0	0	55.3	1.667	0	71.00	33.34	0.00	0.00%	0
1928	0	0	55.3	1.667	0	70.00	33.34	0.00	0.00%	0
1929	0	0	55.3	1.667	0	69.00	33.34	0.00	0.00%	0
1930	0	0	55.3	1.667	0	68.00	33.34	0.00	0.00%	0
1931	0	0	55.3	1.667	0	67.00	33.34	0.00	0.00%	0
1932	0	0	55.3	1.667	0	66.00	33.34	0.50	1.50%	0
1933	0	0	55.3	1.667	0	65.00	33.34	0.90	2.70%	0
1934	0	0	55.3	1.667	0	64.00	33.34	1.38	4.12%	0
1935	0	0	55.3	1.667	0	63.00	33.34	1.86	5.59%	0
1936	0	0	55.3	1.667	0	62.00	33.34	2.36	7.07%	0
1937	0	0	55.3	1.667	0	61.00	33.34	2.85	8.56%	0
1938	0	0	55.3	1.667	0	60.00	33.34	3.35	10.05%	0
1939	0	0	55.3	1.667	0	59.00	33.34	3.85	11.54%	0
1940	0	0	55.3	1.667	0	58.00	33.34	4.35	13.04%	0
1941	0	0	55.3	1.667	0	57.00	33.34	4.84	14.53%	0
1942	0	0	55.3	1.667	0	56.00	33.34	5.34	16.03%	0
1943	0	0	55.3	1.667	0	55.00	33.34	5.84	17.53%	0
1944	0	0	55.3	1.667	0	54.00	33.34	6.34	19.02%	0
1945	0	0	55.3	1.667	0	53.00	33.34	6.84	20.52%	0
1946	0	0	55.3	1.667	0	52.00	33.34	7.34	22.02%	0
1947	0	0	63.7	1.447	0	51.00	33.34	7.84	23.52%	0
1948	248	247	64.6	1.427	353	50.00	33.34	8.34	25.01%	88
1949	245	244	63.5	1.452	354	49.00	33.34	8.84	26.51%	94
1950	2,387	2,378	65.8	1.401	3,332	48.00	33.34	9.34	28.01%	933
1951	0	0	67.7	1.362	0	47.00	33.34	9.84	29.51%	0
1952	0	0	63.2	1.459	0	46.00	33.34	10.34	31.01%	0
1953	0	0	59.2	1.557	0	45.00	33.34	10.84	32.51%	0
1954	0	0	59.6	1.547	0	44.00	33.34	11.34	34.01%	0
1955	314,794	313,579	60.6	1.521	477,096	43.00	33.34	11.84	35.51%	169,417
1956	2,087	2,079	62.1	1.485	3,087	42.00	33.34	12.34	37.01%	1,142
1957	788	785	65.0	1.418	1,113	41.00	33.34	12.84	38.51%	429
1958	0	0	66.4	1.389	0	40.00	33.34	13.34	40.00%	0
1959	2,456	2,447	65.6	1.405	3,439	39.00	33.34	13.84	41.50%	1,427
1960	0	0	64.8	1.423	0	38.00	33.34	14.34	43.00%	0
1961	4,585	4,567	64.1	1.438	6,570	37.00	33.34	14.84	44.50%	2,923
1962	4,773	4,755	63.7	1.447	6,882	36.00	33.34	15.34	46.00%	3,166
1963	0	0	64.6	1.427	0	35.00	33.34	15.84	47.50%	0
1964	358	357	65.1	1.416	505	34.00	33.34	16.34	49.00%	247
1965	1,320	1,315	64.3	1.434	1,885	33.00	33.34	16.84	50.50%	952
1966	6,615	6,589	65.0	1.418	9,347	32.00	33.34	17.34	52.00%	4,860
1967	0	0	67.4	1.368	0	31.00	33.34	17.84	53.50%	0
1968	609	607	70.9	1.300	789	30.00	33.34	18.34	55.00%	434
1969	982	978	74.0	1.246	1,219	29.00	33.34	18.84	56.50%	689
1970	1,483	1,477	76.3	1.208	1,785	28.00	33.34	19.34	58.00%	1,035
1971	1,043,183	1,039,158	79.3	1.163	1,208,201	27.00	33.34	19.84	59.50%	718,880
1972	2,852,236	2,841,231	81.2	1.135	3,226,127	26.00	33.34	20.34	61.00%	1,967,938

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Analog Switching Equipment
Plant Sub-Account: Analog Switching Equipment
Index Number: 2211
Field Code: AEZ
Survivor Curve: 12
Probable Life: 33.34

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1973	3,600,248	3,586,357	81.1	1.137	4,077,215	25.00	33.34	20.84	62.50%	2,548,259
1974	706,098	703,374	85.1	1.083	762,057	24.00	33.34	21.34	63.99%	487,640
1975	2,100,060	2,091,957	91.4	1.009	2,110,268	23.00	33.34	21.84	65.49%	1,382,014
1976	403,439	401,882	94.7	0.974	391,273	22.00	33.34	22.34	66.99%	262,114
1977	1,008,310	1,004,420	92.4	0.998	1,002,246	21.00	33.34	22.84	68.49%	686,438
1978	1,099,639	1,095,396	87.4	1.055	1,155,555	20.00	33.34	23.34	69.99%	808,773
1979	2,796,920	2,786,129	86.2	1.070	2,980,059	19.00	33.34	23.84	71.49%	2,130,444
1980	7,335,848	7,307,544	87.8	1.050	7,673,754	18.00	33.34	24.34	72.99%	5,601,073
1981	13,265,301	13,214,120	95.4	0.966	12,770,879	17.00	33.34	24.84	74.49%	9,513,028
1982	36,531,944	36,390,994	106.9	0.862	31,386,806	16.00	33.34	25.34	75.99%	23,850,834
1983	8,947,870	8,913,347	118.3	0.779	6,946,835	15.00	33.34	25.84	77.49%	5,383,102
1984	12,457,326	12,409,262	129.8	0.710	8,814,591	14.00	33.34	26.34	78.99%	6,962,646
1985	6,421,185	6,396,410	118.1	0.781	4,993,641	13.00	33.34	26.84	80.49%	4,019,382
1986	9,302,272	9,266,381	109.6	0.841	7,795,259	12.00	33.34	27.34	81.99%	6,391,333
1987	9,178,044	9,142,633	105.9	0.871	7,959,875	11.00	33.34	27.84	83.49%	6,645,699
1988	8,512,890	8,480,045	100.0	0.922	7,818,601	10.00	33.34	28.34	84.99%	6,645,029
1989	10,465,338	10,424,960	98.9	0.932	9,718,719	9.00	33.34	28.84	86.49%	8,405,720
1990	6,356,164	6,331,640	95.4	0.966	6,119,258	8.00	33.34	29.34	87.99%	5,384,335
1991	13,140,704	13,090,003	92.3	0.999	13,075,821	7.00	33.34	29.84	89.49%	11,701,553
1992	7,076,834	7,049,530	92.0	1.002	7,064,855	6.00	33.34	30.34	90.99%	6,428,311
1993	6,455,457	6,430,550	96.0	0.960	6,176,007	5.00	33.34	30.84	92.49%	5,712,189
1994	6,774,844	6,748,705	93.5	0.986	6,654,872	4.00	33.34	31.34	93.99%	6,254,915
1995	4,729,352	4,711,105	102.7	0.898	4,229,444	3.00	33.34	31.84	95.49%	4,038,696
1996	5,568,855	5,547,369	105.3	0.876	4,857,240	2.00	33.34	32.34	96.99%	4,711,037
1997	4,499,334	4,481,974	109.6	0.841	3,770,420	1.00	33.34	32.84	98.49%	3,713,487
1998	0	994,898	92.2	1.000	994,898	0.25	33.34	33.34	99.99%	994,799
	192,975,111	193,225,467		0.912	176,255,349				81.44%	143,537,505

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Digital Switching Equipment
Plant Sub-Account: Digital Switching Equipment
Index Number: 2212
Field Code: DEZ
Survivor Curve: 13
Probable Life: 10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1947	45	45	38.7	2.152	97	51.00	10.00	0.00	0.00%	0
1948	0	0	44.4	1.876	0	50.00	10.00	0.00	0.00%	0
1949	0	0	43.4	1.919	0	49.00	10.00	0.00	0.00%	0
1950	6,243	6,245	44.6	1.868	11,663	48.00	10.00	0.00	0.00%	0
1951	0	0	46.3	1.799	0	47.00	10.00	0.00	0.00%	0
1952	0	0	42.4	1.965	0	46.00	10.00	0.00	0.00%	0
1953	0	0	38.9	2.141	0	45.00	10.00	0.00	0.00%	0
1954	0	0	39.3	2.120	0	44.00	10.00	0.00	0.00%	0
1955	80,649	80,670	39.2	2.125	171,424	43.00	10.00	0.00	0.00%	0
1956	582	582	39.8	2.093	1,218	42.00	10.00	0.00	0.00%	0
1957	23,977	23,983	41.4	2.012	48,256	41.00	10.00	0.00	0.00%	0
1958	6,215	6,217	42.3	1.969	12,242	40.00	10.00	0.00	0.00%	0
1959	22,347	22,353	41.5	2.007	44,867	39.00	10.00	0.00	0.00%	0
1960	42,310	42,321	40.6	2.052	86,831	38.00	10.00	0.00	0.00%	0
1961	39,666	39,676	40.4	2.062	81,808	37.00	10.00	0.00	0.00%	0
1962	4,520	4,521	39.6	2.104	9,510	36.00	10.00	0.00	0.00%	0
1963	75	75	39.8	2.093	157	35.00	10.00	0.00	0.00%	0
1964	14,327	14,331	39.8	2.093	29,994	34.00	10.00	0.00	0.00%	0
1965	6,245	6,247	38.7	2.152	13,446	33.00	10.00	0.00	0.00%	0
1966	195,044	195,095	38.3	2.175	424,320	32.00	10.00	0.00	0.00%	0
1967	1,152	1,152	39.0	2.136	2,461	31.00	10.00	0.00	0.00%	0
1968	16,689	16,693	40.4	2.062	34,420	30.00	10.00	0.00	0.00%	0
1969	8,736	8,738	41.5	2.007	17,540	29.00	10.00	0.00	0.00%	0
1970	50,909	50,922	42.6	1.955	99,574	28.00	10.00	0.00	0.00%	0
1971	289,847	289,923	44.4	1.876	543,933	27.00	10.00	0.00	0.00%	0
1972	145,823	145,861	45.6	1.827	266,453	26.00	10.00	0.00	0.00%	0
1973	220,336	220,394	47.7	1.746	384,881	25.00	10.00	0.00	0.00%	0
1974	347,307	347,398	53.0	1.572	546,005	24.00	10.00	0.50	5.00%	27,300
1975	107,111	107,138	57.5	1.449	155,211	23.00	10.00	0.56	5.56%	8,630
1976	51,526	51,537	59.8	1.393	71,790	22.00	10.00	0.61	6.07%	4,358
1977	977,116	977,160	61.1	1.363	1,332,200	21.00	10.00	0.67	6.71%	89,391
1978	1,071,541	1,071,088	61.3	1.359	1,455,492	20.00	10.00	0.76	7.55%	109,890
1979	1,704,665	1,702,241	62.8	1.326	2,257,909	19.00	10.00	0.86	8.63%	194,858
1980	1,250,263	1,246,365	64.2	1.298	1,617,168	18.00	10.00	1.00	9.96%	161,070
1981	2,332,558	2,319,779	69.9	1.192	2,764,486	17.00	10.00	1.16	11.57%	319,851
1982	4,967,011	4,926,083	75.4	1.105	5,442,212	16.00	10.00	1.35	13.49%	734,154
1983	1,082,363	1,070,470	83.4	0.999	1,069,187	15.00	10.00	1.57	15.74%	168,290
1984	6,755,388	6,665,500	87.6	0.951	6,338,312	14.00	10.00	1.83	18.34%	1,162,447
1985	10,369,634	10,215,138	97.0	0.859	8,772,381	13.00	10.00	2.13	21.31%	1,869,394
1986	31,135,021	30,647,997	101.8	0.818	25,078,371	12.00	10.00	2.47	24.69%	6,191,850
1987	35,799,534	35,242,146	100.2	0.831	29,298,111	11.00	10.00	2.85	28.49%	8,347,032
1988	44,869,627	44,204,644	100.0	0.833	36,822,468	10.00	10.00	3.27	32.73%	12,051,994
1989	44,196,643	43,596,383	99.1	0.840	36,642,206	9.00	10.00	3.74	37.41%	13,707,849
1990	35,879,706	35,447,611	98.2	0.848	30,068,123	8.00	10.00	4.26	42.56%	12,796,993

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Digital Switching Equipment
Plant Sub-Account: Digital Switching Equipment
Index Number: 2212
Field Code: DEZ
Survivor Curve: 13
Probable Life: 10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1991	42,753,331	42,310,063	99.6	0.837	35,398,264	7.00	10.00	4.82	48.17%	17,051,344
1992	52,566,860	52,110,408	94.7	0.879	45,829,662	6.00	10.00	5.42	54.24%	24,858,009
1993	51,195,739	50,833,478	91.2	0.913	46,429,169	5.00	10.00	6.08	60.77%	28,215,006
1994	63,924,561	63,566,579	88.8	0.938	59,630,991	4.00	10.00	6.78	67.75%	40,399,996
1995	99,607,985	99,181,365	86.2	0.967	95,873,482	3.00	10.00	7.52	75.18%	72,077,684
1996	67,483,310	67,271,859	86.9	0.959	64,484,993	2.00	10.00	8.30	83.05%	53,554,787
1997	75,532,997	75,370,800	84.5	0.986	74,300,445	1.00	10.00	9.13	91.33%	67,858,596
1998	0	10,500,614	83.3	1.000	10,500,614	0.25	10.00	10.00	100.01%	10,501,664
	677,137,534	682,159,890		0.915	624,464,347				59.65%	372,462,435

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Operator Systems
Plant Sub-Account:	Operator Systems
Index Number:	2220
Field Code:	OSZ
Survivor Curve:	14
Probable Life:	8

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1974	399	409	59.9	1.796	735	24.00	8.00	0.00	0.00%	0
1975	0	0	65.6	1.640	0	23.00	8.00	0.00	0.00%	0
1976	0	0	69.1	1.557	0	22.00	8.00	0.00	0.00%	0
1977	732	751	70.9	1.518	1,140	21.00	8.00	0.00	0.00%	0
1978	0	0	70.8	1.520	0	20.00	8.00	0.00	0.00%	0
1979	27,514	28,228	71.3	1.509	42,599	19.00	8.00	0.00	0.00%	0
1980	0	0	73.0	1.474	0	18.00	8.00	0.00	0.00%	0
1981	2,232	2,290	79.2	1.359	3,111	17.00	8.00	0.00	0.00%	0
1982	80,926	83,026	87.3	1.233	102,332	16.00	8.00	0.00	0.00%	0
1983	6,288	6,451	96.5	1.115	7,193	15.00	8.00	0.00	0.00%	0
1984	2,825	2,898	103.3	1.042	3,019	14.00	8.00	0.00	0.00%	0
1985	1,241	1,273	105.6	1.019	1,297	13.00	8.00	0.00	0.00%	0
1986	1,467,973	1,506,062	104.7	1.028	1,547,777	12.00	8.00	0.00	0.00%	0
1987	868,219	890,746	102.2	1.053	937,811	11.00	8.00	0.00	0.00%	0
1988	354,255	363,446	100.0	1.076	391,068	10.00	8.00	0.50	6.25%	24,442
1989	24,315	24,946	101.3	1.062	26,497	9.00	8.00	0.50	6.28%	1,664
1990	2,296,069	2,355,637	104.4	1.031	2,427,840	8.00	8.00	0.71	8.83%	214,378
1991	2,518,440	2,583,782	104.2	1.033	2,668,090	7.00	8.00	1.30	16.26%	433,831
1992	180,644	185,331	104.0	1.035	191,746	6.00	8.00	2.12	26.49%	50,794
1993	560,872	575,425	102.9	1.046	601,707	5.00	8.00	3.05	38.10%	229,251
1994	8,707	8,933	106.7	1.008	9,008	4.00	8.00	4.02	50.27%	4,528
1995	0	0	105.1	1.024	0	3.00	8.00	5.01	62.64%	0
1996	0	0	107.5	1.001	0	2.00	8.00	6.01	75.08%	0
1997	0	0	107.4	1.002	0	1.00	8.00	7.00	87.54%	0
1998	0	0	107.6	1.000	0	0.25	8.00	8.00	100.00%	0
	8,401,651	8,619,634		1.040	8,962,972				10.70%	958,888

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Radio Systems
Plant Sub-Account: Radio Systems
Index Number: 2231
Field Code: RDZ
Survivor Curve: 15
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1950	2,365	2,360	39.9	2.358	5,566	48.00	15.00	1.10	7.33%	408
1951	0	0	41.3	2.278	0	47.00	15.00	1.17	7.78%	0
1952	0	0	38.0	2.476	0	46.00	15.00	1.24	8.27%	0
1953	0	0	35.2	2.673	0	45.00	15.00	1.28	8.56%	0
1954	0	0	35.4	2.658	0	44.00	15.00	1.32	8.82%	0
1955	3,610	3,603	34.4	2.735	9,855	43.00	15.00	1.38	9.21%	908
1956	2,362	2,357	33.0	2.852	6,722	42.00	15.00	1.45	9.64%	648
1957	4,362	4,353	33.1	2.843	12,376	41.00	15.00	1.51	10.09%	1,249
1958	2,000	1,996	33.4	2.817	5,623	40.00	15.00	1.58	10.56%	594
1959	2,236	2,231	33.3	2.826	6,306	39.00	15.00	1.66	11.06%	697
1960	3,521	3,514	33.2	2.834	9,959	38.00	15.00	1.74	11.60%	1,155
1961	15,856	15,823	32.9	2.860	45,255	37.00	15.00	1.82	12.16%	5,503
1962	8,394	8,376	32.7	2.878	24,103	36.00	15.00	1.91	12.76%	3,076
1963	4,820	4,809	33.1	2.843	13,672	35.00	15.00	2.01	13.40%	1,832
1964	29,920	29,850	33.1	2.843	84,860	34.00	15.00	2.11	14.07%	11,940
1965	8,890	8,868	32.2	2.922	25,915	33.00	15.00	2.22	14.78%	3,830
1966	22,830	22,769	31.8	2.959	67,377	32.00	15.00	2.33	15.54%	10,470
1967	42,018	41,896	33.5	2.809	117,685	31.00	15.00	2.45	16.34%	19,230
1968	68,858	68,639	35.8	2.628	180,418	30.00	15.00	2.58	17.19%	31,014
1969	12,237	12,194	36.7	2.564	31,266	29.00	15.00	2.71	18.09%	5,656
1970	66,183	65,924	37.5	2.509	165,424	28.00	15.00	2.86	19.05%	31,513
1971	285,569	284,317	39.0	2.413	686,006	27.00	15.00	3.01	20.07%	137,681
1972	304,413	302,920	40.3	2.335	707,315	26.00	15.00	3.17	21.15%	149,597
1973	339,829	337,969	42.5	2.214	748,304	25.00	15.00	3.34	22.30%	166,872
1974	105,654	105,011	46.9	2.006	210,695	24.00	15.00	3.53	23.52%	49,555
1975	108,049	107,323	51.1	1.841	197,635	23.00	15.00	3.72	24.82%	49,053
1976	306,139	303,886	54.1	1.739	528,571	22.00	15.00	3.93	26.20%	138,486
1977	407,817	404,558	58.4	1.611	651,865	21.00	15.00	4.15	27.68%	180,436
1978	405,118	401,637	63.4	1.484	596,120	20.00	15.00	4.39	29.25%	174,365
1979	259,414	257,042	69.2	1.360	349,532	19.00	15.00	4.64	30.93%	108,110
1980	189,063	187,243	73.5	1.280	239,722	18.00	15.00	4.91	32.72%	78,437
1981	260,247	257,640	81.0	1.162	299,308	17.00	15.00	5.19	34.63%	103,650
1982	295,671	292,624	86.1	1.093	319,814	16.00	15.00	5.50	36.67%	117,276
1983	1,795,069	1,776,269	90.1	1.044	1,855,127	15.00	15.00	5.83	38.86%	720,902
1984	933,833	924,013	97.7	0.963	889,965	14.00	15.00	6.18	41.20%	366,666
1985	6,212,820	6,148,038	99.3	0.948	5,826,087	13.00	15.00	6.56	43.70%	2,546,000
1986	1,089,411	1,078,292	98.8	0.952	1,026,997	12.00	15.00	6.96	46.39%	476,424
1987	4,834,762	4,787,102	97.3	0.967	4,629,664	11.00	15.00	7.39	49.27%	2,281,035
1988	5,070,788	5,023,182	100.0	0.941	4,726,814	10.00	15.00	7.85	52.36%	2,474,960
1989	3,839,193	3,805,373	101.4	0.928	3,531,417	9.00	15.00	8.35	55.68%	1,966,293
1990	2,429,706	2,409,944	103.6	0.908	2,188,955	8.00	15.00	8.89	59.25%	1,296,956
1991	950,627	943,614	106.1	0.887	836,890	7.00	15.00	9.46	63.10%	528,078
1992	2,113,668	2,099,805	105.6	0.891	1,871,133	6.00	15.00	10.09	67.24%	1,258,150
1993	1,318,784	1,311,274	107.5	0.875	1,147,822	5.00	15.00	10.76	71.70%	822,988

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Radio Systems
Plant Sub-Account:	Radio Systems
Index Number:	2231
Field Code:	RDZ
Survivor Curve:	15
Probable Life:	15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1994	3,084,511	3,069,692	106.4	0.884	2,714,831	4.00	15.00	11.48	76.52%	2,077,389
1995	172,892	172,217	101.2	0.930	160,135	3.00	15.00	12.26	81.72%	130,862
1996	561,793	560,101	100.2	0.939	526,003	2.00	15.00	13.10	87.34%	459,411
1997	647,225	645,839	94.7	0.994	641,747	1.00	15.00	14.01	93.42%	599,520
1998	0	3,186	94.1	1.000	3,186	0.25	15.00	15.00	100.00%	3,186
	38,622,527	38,299,675		1.016	38,924,041				50.33%	19,592,061

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Circuit DDS
Plant Sub-Account:	Circuit DDS
Index Number:	2232
Field Code:	CRDA
Survivor Curve:	16
Probable Life:	8

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1974	7,958	7,971	53.0	1.643	13,100	24.00	8.00	4.16	51.95%	6,805
1975	326	326	57.5	1.515	495	23.00	8.00	4.16	51.95%	257
1976	4,287	4,293	59.8	1.457	6,252	22.00	8.00	4.16	51.95%	3,248
1977	96	96	61.1	1.426	137	21.00	8.00	4.16	51.95%	71
1978	7,186	7,191	61.3	1.421	10,218	20.00	8.00	4.16	51.95%	5,308
1979	126,758	126,805	62.8	1.387	175,871	19.00	8.00	4.16	51.96%	91,382
1980	26,771	26,768	64.2	1.357	36,315	18.00	8.00	4.16	51.97%	18,873
1981	34,582	34,556	69.9	1.246	43,059	17.00	8.00	4.16	51.98%	22,382
1982	274,999	274,569	75.4	1.155	317,175	16.00	8.00	4.16	51.99%	164,899
1983	262,798	262,121	83.4	1.044	273,749	15.00	8.00	4.16	52.02%	142,404
1984	190,489	189,754	87.6	0.994	188,671	14.00	8.00	4.16	52.05%	98,203
1985	442,262	439,843	97.0	0.898	394,952	13.00	8.00	4.17	52.11%	205,809
1986	207,923	206,367	101.8	0.856	176,568	12.00	8.00	4.18	52.19%	92,151
1987	421,626	417,423	100.2	0.869	362,850	11.00	8.00	4.19	52.32%	189,843
1988	748,069	738,351	100.0	0.871	643,104	10.00	8.00	4.20	52.50%	337,630
1989	517,380	508,806	98.8	0.882	448,553	9.00	8.00	4.22	52.79%	236,791
1990	471,992	462,253	99.0	0.880	406,689	8.00	8.00	4.26	53.22%	216,440
1991	522,150	509,150	100.3	0.868	442,143	7.00	8.00	4.31	53.87%	238,183
1992	1,057,048	1,026,709	92.2	0.945	969,917	6.00	8.00	4.39	54.88%	532,290
1993	1,185,088	1,148,626	90.6	0.961	1,104,253	5.00	8.00	4.52	56.44%	623,241
1994	1,210,547	1,175,528	89.4	0.974	1,145,286	4.00	8.00	4.71	58.89%	674,459
1995	1,359,123	1,361,247	86.9	1.002	1,364,380	3.00	8.00	5.03	62.82%	857,104
1996	1,444,501	1,447,666	87.2	0.999	1,446,005	2.00	8.00	6.01	75.14%	1,086,528
1997	771,035	772,724	87.1	1.000	772,724	1.00	8.00	7.01	87.64%	677,215
1998	0	91,899	87.1	1.000	91,899	0.25	8.00	8.01	100.14%	92,028
	11,294,994	11,241,043		0.964	10,834,365				61.04%	6,613,545

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Circuit Digital
Plant Sub-Account: Circuit Digital
Index Number: 2232
Field Code: CRD
Survivor Curve: 17
Probable Life: 10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	1,665	1,664	38.7	2.152	3,581	73.00	10.00	0.00	0.00%	0
1926	0	0	38.7	2.152	0	72.00	10.00	0.00	0.00%	0
1927	0	0	38.7	2.152	0	71.00	10.00	0.00	0.00%	0
1928	0	0	38.7	2.152	0	70.00	10.00	0.00	0.00%	0
1929	0	0	38.7	2.152	0	69.00	10.00	0.00	0.00%	0
1930	206	206	38.7	2.152	443	68.00	10.00	0.00	0.00%	0
1931	0	0	38.7	2.152	0	67.00	10.00	0.00	0.00%	0
1932	0	0	38.7	2.152	0	66.00	10.00	0.00	0.00%	0
1933	0	0	38.7	2.152	0	65.00	10.00	0.00	0.00%	0
1934	0	0	38.7	2.152	0	64.00	10.00	0.00	0.00%	0
1935	0	0	38.7	2.152	0	63.00	10.00	0.00	0.00%	0
1936	0	0	38.7	2.152	0	62.00	10.00	0.00	0.00%	0
1937	0	0	38.7	2.152	0	61.00	10.00	0.00	0.00%	0
1938	0	0	38.7	2.152	0	60.00	10.00	0.00	0.00%	0
1939	0	0	38.7	2.152	0	59.00	10.00	0.00	0.00%	0
1940	1,381	1,380	38.7	2.152	2,971	58.00	10.00	0.50	5.00%	149
1941	113	113	38.7	2.152	243	57.00	10.00	1.50	15.00%	36
1942	2,753	2,751	38.7	2.152	5,922	56.00	10.00	1.50	15.00%	888
1943	0	0	38.7	2.152	0	55.00	10.00	2.50	25.00%	0
1944	0	0	38.7	2.152	0	54.00	10.00	2.50	25.00%	0
1945	0	0	38.7	2.152	0	53.00	10.00	2.30	23.00%	0
1946	0	0	38.7	2.152	0	52.00	10.00	2.50	25.00%	0
1947	0	0	43.8	1.902	0	51.00	10.00	2.41	24.09%	0
1948	0	0	44.4	1.876	0	50.00	10.00	2.50	25.00%	0
1949	568	568	43.4	1.919	1,089	49.00	10.00	2.50	25.00%	272
1950	135,372	135,280	44.6	1.868	252,664	48.00	10.00	2.56	25.57%	64,606
1951	0	0	46.3	1.799	0	47.00	10.00	2.56	25.58%	0
1952	3,600	3,598	42.4	1.965	7,068	46.00	10.00	2.59	25.92%	1,832
1953	0	0	38.9	2.141	0	45.00	10.00	2.60	25.98%	0
1954	747	746	39.3	2.120	1,582	44.00	10.00	2.63	26.29%	416
1955	551,276	550,900	39.2	2.125	1,170,663	43.00	10.00	2.64	26.43%	309,406
1956	1,037	1,036	39.8	2.093	2,169	42.00	10.00	2.66	26.62%	577
1957	2,341	2,339	41.4	2.012	4,707	41.00	10.00	2.68	26.79%	1,261
1958	1,519	1,518	42.3	1.969	2,989	40.00	10.00	2.70	26.95%	806
1959	664	664	41.5	2.007	1,332	39.00	10.00	2.72	27.17%	362
1960	2,015	2,014	40.6	2.052	4,131	38.00	10.00	2.74	27.35%	1,130
1961	27,143	27,124	40.4	2.062	55,927	37.00	10.00	2.76	27.57%	15,419
1962	1,394	1,393	39.6	2.104	2,930	36.00	10.00	2.78	27.79%	814
1963	7,017	7,012	39.8	2.093	14,676	35.00	10.00	2.80	28.03%	4,114
1964	42,994	42,963	39.8	2.093	89,920	34.00	10.00	2.83	28.29%	25,438
1965	23,001	22,984	38.7	2.152	49,472	33.00	10.00	2.86	28.56%	14,129
1966	59,893	59,848	38.3	2.175	130,165	32.00	10.00	2.89	28.85%	37,553
1967	95,453	95,378	39.0	2.136	203,718	31.00	10.00	2.92	29.17%	59,425
1968	11,811	11,801	40.4	2.062	24,333	30.00	10.00	2.95	29.50%	7,178

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Circuit Digital
Plant Sub-Account:	Circuit Digital
Index Number:	2232
Field Code:	CRD
Survivor Curve:	17
Probable Life:	10

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	330,697	330,409	41.5	2.007	663,207	29.00	10.00	2.99	29.86%	198,034
1970	148,455	148,316	42.6	1.955	290,017	28.00	10.00	3.03	30.25%	87,730
1971	505,209	504,691	44.4	1.876	946,863	27.00	10.00	3.07	30.67%	290,403
1972	525,468	524,868	45.6	1.827	958,805	26.00	10.00	3.11	31.12%	298,380
1973	973,888	972,629	47.7	1.746	1,698,533	25.00	10.00	3.16	31.61%	536,906
1974	1,274,370	1,272,477	53.0	1.572	1,999,950	24.00	10.00	3.21	32.14%	642,784
1975	1,036,033	1,034,241	57.5	1.449	1,498,300	23.00	10.00	3.27	32.71%	490,094
1976	1,248,779	1,246,236	59.8	1.393	1,735,977	22.00	10.00	3.33	33.34%	578,775
1977	743,803	742,006	61.1	1.363	1,011,605	21.00	10.00	3.40	34.01%	344,047
1978	1,209,921	1,206,437	61.3	1.359	1,639,416	20.00	10.00	3.48	34.75%	569,697
1979	2,304,254	2,296,336	62.8	1.326	3,045,936	19.00	10.00	3.56	35.56%	1,083,135
1980	4,158,530	4,141,503	64.2	1.298	5,373,632	18.00	10.00	3.65	36.45%	1,958,689
1981	6,751,302	6,718,508	69.9	1.192	8,006,462	17.00	10.00	3.74	37.43%	2,996,819
1982	14,356,005	14,273,845	75.4	1.105	15,769,380	16.00	10.00	3.85	38.50%	6,071,211
1983	24,273,189	24,111,024	83.4	0.999	24,082,114	15.00	10.00	3.97	39.70%	9,560,599
1984	32,269,953	32,021,154	87.6	0.951	30,449,339	14.00	10.00	4.10	41.02%	12,490,319
1985	55,466,887	54,980,072	97.0	0.859	47,214,845	13.00	10.00	4.25	42.49%	20,061,588
1986	59,018,517	58,438,180	101.8	0.818	47,818,275	12.00	10.00	4.41	44.14%	21,106,987
1987	47,290,272	46,778,761	100.2	0.831	38,888,930	11.00	10.00	4.60	45.99%	17,885,019
1988	50,206,123	49,621,240	100.0	0.833	41,334,493	10.00	10.00	4.81	48.07%	19,869,491
1989	46,871,990	46,298,042	99.1	0.840	38,912,916	9.00	10.00	5.04	50.44%	19,627,675
1990	58,936,728	58,199,481	98.2	0.848	49,367,196	8.00	10.00	5.31	53.15%	26,238,664
1991	57,999,681	57,283,329	99.6	0.837	47,925,488	7.00	10.00	5.62	56.25%	26,958,087
1992	50,304,804	49,716,632	94.7	0.879	43,724,403	6.00	10.00	5.98	59.83%	26,160,310
1993	46,231,198	45,746,759	91.2	0.913	41,783,173	5.00	10.00	6.40	63.99%	26,737,052
1994	66,103,681	65,529,075	88.8	0.938	61,471,983	4.00	10.00	6.89	68.88%	42,341,902
1995	84,211,378	83,675,594	86.2	0.967	80,884,858	3.00	10.00	7.47	74.65%	60,380,546
1996	128,004,745	127,577,363	86.9	0.959	122,292,225	2.00	10.00	8.16	81.55%	99,729,309
1997	85,017,783	84,959,953	84.5	0.986	83,753,421	1.00	10.00	9.00	90.00%	75,378,079
1998	0	60,098,685	83.3	1.000	60,098,685	0.25	10.00	10.00	100.00%	60,098,685
	928,747,606	981,421,124		0.924	906,673,123				64.12%	581,316,828

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Circuit Analog
Plant Sub-Account: Circuit Analog
Index Number: 2232
Field Code: CRA
Survivor Curve: 18
Probable Life: 7

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1949	3,653	3,648	43.4	2.613	9,533	49.00	7.00	0.00	0.00%	0
1950	12,346	12,331	44.6	2.543	31,352	48.00	7.00	0.00	0.00%	0
1951	1,971	1,969	46.3	2.449	4,821	47.00	7.00	0.00	0.00%	0
1952	733	732	42.4	2.675	1,958	46.00	7.00	0.00	0.00%	0
1953	228	228	38.9	2.915	664	45.00	7.00	0.00	0.00%	0
1954	3,796	3,791	39.3	2.885	10,940	44.00	7.00	0.00	0.00%	0
1955	39,354	39,305	39.2	2.893	113,704	43.00	7.00	0.00	0.00%	0
1956	14,870	14,851	39.8	2.849	42,315	42.00	7.00	0.00	0.00%	0
1957	7,787	7,777	41.4	2.739	21,303	41.00	7.00	0.00	0.00%	0
1958	43,651	43,597	42.3	2.681	116,876	40.00	7.00	0.00	0.00%	0
1959	29,234	29,198	41.5	2.733	79,783	39.00	7.00	0.00	0.00%	0
1960	28,150	28,115	40.6	2.793	78,528	38.00	7.00	0.00	0.00%	0
1961	14,044	14,026	40.4	2.807	39,371	37.00	7.00	0.00	0.00%	0
1962	32,848	32,807	39.6	2.864	93,947	36.00	7.00	0.00	0.00%	0
1963	437,990	437,444	39.8	2.849	1,246,386	35.00	7.00	0.00	0.00%	0
1964	17,568	17,546	39.8	2.849	49,993	34.00	7.00	0.00	0.00%	0
1965	30,470	30,432	38.7	2.930	89,173	33.00	7.00	0.00	0.00%	0
1966	43,941	43,886	38.3	2.961	129,940	32.00	7.00	0.00	0.00%	0
1967	52,459	52,394	39.0	2.908	152,345	31.00	7.00	0.00	0.00%	0
1968	51,075	51,011	40.4	2.807	143,185	30.00	7.00	0.00	0.00%	0
1969	130,059	129,897	41.5	2.733	354,947	29.00	7.00	0.00	0.00%	0
1970	253,882	253,566	42.6	2.662	674,984	28.00	7.00	0.00	0.00%	0
1971	499,904	499,281	44.4	2.554	1,275,190	27.00	7.00	0.50	7.14%	91,049
1972	272,663	272,322	45.6	2.487	677,223	26.00	7.00	0.72	10.32%	69,889
1973	431,515	430,973	47.7	2.377	1,024,577	25.00	7.00	0.82	11.76%	120,490
1974	352,140	351,690	53.0	2.140	752,485	24.00	7.00	0.88	12.55%	94,437
1975	562,582	561,833	57.5	1.972	1,108,033	23.00	7.00	0.93	13.31%	147,479
1976	417,154	416,544	59.8	1.896	789,901	22.00	7.00	0.99	14.14%	111,692
1977	552,955	551,983	61.1	1.856	1,024,466	21.00	7.00	1.06	15.07%	154,387
1978	775,713	773,880	61.3	1.850	1,431,614	20.00	7.00	1.13	16.10%	230,490
1979	1,471,473	1,466,302	62.8	1.806	2,647,749	19.00	7.00	1.21	17.23%	456,207
1980	1,906,041	1,895,475	64.2	1.766	3,348,082	18.00	7.00	1.29	18.48%	618,726
1981	2,372,863	2,351,813	69.9	1.622	3,815,388	17.00	7.00	1.39	19.87%	758,118
1982	3,877,358	3,823,230	75.4	1.504	5,750,057	16.00	7.00	1.50	21.41%	1,231,087
1983	4,166,131	4,077,687	83.4	1.360	5,544,481	15.00	7.00	1.62	23.13%	1,282,438
1984	4,214,239	4,083,866	87.6	1.295	5,286,649	14.00	7.00	1.75	25.03%	1,323,248
1985	5,058,360	4,840,600	97.0	1.169	5,659,011	13.00	7.00	1.90	27.16%	1,536,987
1986	5,545,157	5,228,271	101.8	1.114	5,824,027	12.00	7.00	2.07	29.53%	1,719,835
1987	6,447,044	5,980,473	100.2	1.132	6,768,320	11.00	7.00	2.25	32.18%	2,178,045
1988	4,024,210	3,672,212	100.0	1.134	4,164,288	10.00	7.00	2.46	35.16%	1,464,164
1989	3,813,888	3,428,930	103.7	1.094	3,749,669	9.00	7.00	2.70	38.51%	1,443,997
1990	1,917,782	1,704,534	103.3	1.098	1,871,192	8.00	7.00	2.96	42.30%	791,514
1991	1,144,756	1,010,993	106.5	1.065	1,076,494	7.00	7.00	3.26	46.57%	501,323
1992	1,934,749	1,708,605	108.2	1.048	1,790,719	6.00	7.00	3.60	51.44%	921,146

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Circuit Analog
Plant Sub-Account: Circuit Analog
Index Number: 2232
Field Code: CRA
Survivor Curve: 18
Probable Life: 7

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1993	1,314,814	1,169,073	109.7	1.034	1,208,504	5.00	7.00	3.99	56.97%	688,484
1994	1,103,878	994,723	111.8	1.014	1,008,959	4.00	7.00	4.43	63.31%	638,772
1995	855,719	785,770	111.8	1.014	797,016	3.00	7.00	4.94	70.59%	562,613
1996	796,848	748,525	111.6	1.016	760,598	2.00	7.00	5.53	78.99%	600,796
1997	963,388	927,638	111.9	1.013	940,073	1.00	7.00	6.21	88.71%	833,939
1998	0	86,518	113.4	1.000	86,518	0.25	7.00	7.00	100.03%	86,544
	58,043,433	55,092,296		1.337	73,667,331				28.04%	20,657,898

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Other Term Equipment
Plant Sub-Account: Other Term Equipment
Index Number: 2362
Field Code: OTO
Survivor Curve: 20
Probable Life: 6

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1946	9,634	9,657	28.3	3.855	37,227	52.00	6.00	4.24	70.66%	26,305
1947	0	0	32.0	3.409	0	51.00	6.00	4.22	70.34%	0
1948	0	0	31.8	3.431	0	50.00	6.00	4.22	70.34%	0
1949	0	0	31.7	3.442	0	49.00	6.00	4.24	70.64%	0
1950	0	0	32.2	3.388	0	48.00	6.00	4.24	70.59%	0
1951	367	368	34.7	3.144	1,157	47.00	6.00	4.23	70.49%	815
1952	2,295	2,300	34.0	3.209	7,381	46.00	6.00	4.23	70.56%	5,208
1953	646	648	33.1	3.296	2,134	45.00	6.00	4.24	70.63%	1,507
1954	0	0	33.6	3.247	0	44.00	6.00	4.23	70.50%	0
1955	86,222	86,424	33.2	3.286	284,001	43.00	6.00	4.24	70.61%	200,533
1956	8,840	8,861	33.9	3.218	28,516	42.00	6.00	4.24	70.58%	20,127
1957	1,271	1,274	34.8	3.135	3,994	41.00	6.00	4.23	70.53%	2,817
1958	0	0	35.6	3.065	0	40.00	6.00	4.23	70.58%	0
1959	0	0	36.0	3.031	0	39.00	6.00	4.23	70.57%	0
1960	1,485	1,488	35.8	3.047	4,536	38.00	6.00	4.23	70.56%	3,201
1961	55,484	55,614	35.9	3.039	169,011	37.00	6.00	4.23	70.57%	119,271
1962	4,553	4,564	36.0	3.031	13,830	36.00	6.00	4.23	70.56%	9,759
1963	19,311	19,356	36.3	3.006	58,175	35.00	6.00	4.23	70.56%	41,049
1964	5,753	5,766	37.4	2.917	16,822	34.00	6.00	4.23	70.56%	11,869
1965	10,401	10,425	37.8	2.886	30,090	33.00	6.00	4.23	70.56%	21,232
1966	123,061	123,350	38.7	2.819	347,739	32.00	6.00	4.23	70.56%	245,364
1967	15,280	15,316	40.0	2.728	41,774	31.00	6.00	4.23	70.56%	29,476
1968	30,133	30,204	41.6	2.623	79,213	30.00	6.00	4.23	70.56%	55,892
1969	14,444	14,478	44.5	2.452	35,496	29.00	6.00	4.23	70.56%	25,046
1970	53,122	53,247	46.4	2.351	125,200	28.00	6.00	4.23	70.56%	88,341
1971	125,671	125,969	49.2	2.217	279,333	27.00	6.00	4.23	70.56%	197,097
1972	12,292	12,321	52.4	2.082	25,653	26.00	6.00	4.23	70.56%	18,101
1973	63,021	63,171	53.8	2.028	128,104	25.00	6.00	4.23	70.56%	90,390
1974	94,321	94,547	57.6	1.894	179,081	24.00	6.00	4.23	70.56%	126,360
1975	84,953	85,158	63.2	1.726	147,005	23.00	6.00	4.23	70.56%	103,727
1976	154,853	155,229	67.6	1.614	250,525	22.00	6.00	4.23	70.56%	176,771
1977	166,500	166,908	71.4	1.528	255,038	21.00	6.00	4.23	70.56%	179,955
1978	269,061	269,729	74.1	1.472	397,132	20.00	6.00	4.23	70.56%	280,216
1979	290,512	291,245	77.7	1.404	408,942	19.00	6.00	4.23	70.56%	288,549
1980	231,832	232,428	83.2	1.311	304,782	18.00	6.00	4.23	70.57%	215,085
1981	145,522	145,905	89.8	1.215	177,263	17.00	6.00	4.23	70.57%	125,095
1982	121,872	122,202	97.7	1.117	136,461	16.00	6.00	4.23	70.57%	96,301
1983	303,874	304,727	99.7	1.094	333,458	15.00	6.00	4.23	70.58%	235,355
1984	283,927	284,760	96.5	1.131	321,941	14.00	6.00	4.24	70.59%	227,258
1985	11,360	11,395	91.9	1.187	13,528	13.00	6.00	4.24	70.61%	9,552
1986	3,925,467	3,938,377	95.5	1.142	4,499,235	12.00	6.00	4.24	70.65%	3,178,709
1987	2,335,789	2,344,052	96.6	1.129	2,647,372	11.00	6.00	4.24	70.70%	1,871,692
1988	1,968,273	1,975,847	100.0	1.091	2,155,649	10.00	6.00	4.25	70.78%	1,525,768
1989	1,927,728	1,935,884	98.7	1.105	2,139,867	9.00	6.00	4.25	70.91%	1,517,380

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Other Term Equipment
Plant Sub-Account: Other Term Equipment
Index Number: 2362
Field Code: OTO
Survivor Curve: 20
Probable Life: 6

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1990	3,169,647	3,184,529	99.0	1.102	3,509,415	8.00	6.00	4.27	71.12%	2,495,896
1991	3,590,134	3,608,953	99.8	1.093	3,945,258	7.00	6.00	4.29	71.46%	2,819,282
1992	2,918,111	2,935,189	102.4	1.065	3,127,238	6.00	6.00	4.32	72.00%	2,251,611
1993	3,133,880	3,154,147	106.7	1.022	3,225,093	5.00	6.00	4.37	72.88%	2,350,448
1994	3,441,974	3,465,880	110.3	0.989	3,428,173	4.00	6.00	4.46	74.31%	2,547,476
1995	4,579,873	4,611,994	111.0	0.983	4,533,050	3.00	6.00	4.60	76.67%	3,475,489
1996	5,142,200	5,174,140	110.4	0.988	5,113,213	2.00	6.00	4.84	80.64%	4,123,295
1997	5,247,784	5,268,469	109.3	0.998	5,258,829	1.00	6.00	5.25	87.50%	4,601,475
1998	0	2,501,883	109.1	1.000	2,501,883	0.25	6.00	6.00	100.00%	2,501,883
	44,182,733	46,908,379		1.081	50,728,818				75.97%	38,538,027

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Pole Lines
Plant Sub-Account:	Pole Lines
Index Number:	2411
Field Code:	PLZA
Survivor Curve:	21
Probable Life:	25

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	45,413	45,413	12.1	13.719	623,021	73.00	25.00	0.00	0.00%	0
1926	29,782	29,782	12.1	13.719	408,580	72.00	25.00	0.00	0.00%	0
1927	73,199	73,199	12.1	13.719	1,004,218	71.00	25.00	0.00	0.00%	0
1928	84,141	84,141	12.1	13.719	1,154,331	70.00	25.00	0.00	0.00%	0
1929	85,532	85,532	12.1	13.719	1,173,414	69.00	25.00	0.00	0.00%	0
1930	90,207	90,207	12.1	13.719	1,237,551	68.00	25.00	0.00	0.00%	0
1931	21,055	21,055	12.1	13.719	288,854	67.00	25.00	0.00	0.00%	0
1932	26,699	26,699	12.1	13.719	366,284	66.00	25.00	0.00	0.00%	0
1933	26,707	26,707	12.1	13.719	366,394	65.00	25.00	0.00	0.00%	0
1934	21,872	21,872	12.1	13.719	300,062	64.00	25.00	0.00	0.00%	0
1935	57,283	57,283	12.1	13.719	785,866	63.00	25.00	0.00	0.00%	0
1936	42,632	42,632	12.1	13.719	584,869	62.00	25.00	0.00	0.00%	0
1937	63,646	63,646	12.1	13.719	873,160	61.00	25.00	0.00	0.00%	0
1938	43,386	43,386	12.1	13.719	595,213	60.00	25.00	0.00	0.00%	0
1939	50,873	50,873	12.1	13.719	697,927	59.00	25.00	0.00	0.00%	0
1940	127,365	127,365	12.1	13.719	1,747,321	58.00	25.00	0.00	0.00%	0
1941	137,784	137,784	12.1	13.719	1,890,260	57.00	25.00	0.00	0.00%	0
1942	80,443	80,443	12.1	13.719	1,103,598	56.00	25.00	0.00	0.00%	0
1943	41,140	41,140	12.1	13.719	564,400	55.00	25.00	0.00	0.00%	0
1944	52,816	52,816	12.1	13.719	724,583	54.00	25.00	0.00	0.00%	0
1945	137,169	137,169	12.1	13.719	1,881,823	53.00	25.00	0.00	0.00%	0
1946	181,285	181,285	12.1	13.719	2,487,050	52.00	25.00	0.00	0.00%	0
1947	236,217	236,217	14.3	11.608	2,742,099	51.00	25.00	0.00	0.00%	0
1948	243,486	243,486	14.7	11.293	2,749,570	50.00	25.00	0.00	0.00%	0
1949	256,963	256,963	14.5	11.448	2,941,783	49.00	25.00	0.00	0.00%	0
1950	349,090	349,090	14.7	11.293	3,942,105	48.00	25.00	0.00	0.00%	0
1951	383,715	383,715	15.7	10.573	4,057,114	47.00	25.00	0.00	0.00%	0
1952	447,626	447,626	16.6	10.000	4,476,260	46.00	25.00	0.00	0.00%	0
1953	588,012	588,012	17.2	9.651	5,675,000	45.00	25.00	0.00	0.00%	0
1954	811,550	811,550	17.0	9.765	7,924,547	44.00	25.00	0.00	0.00%	0
1955	681,817	681,817	16.8	9.881	6,737,001	43.00	25.00	0.00	0.00%	0
1956	718,932	718,932	17.9	9.274	6,667,191	42.00	25.00	0.00	0.00%	0
1957	949,167	949,167	19.1	8.691	8,249,305	41.00	25.00	0.00	0.00%	0
1958	1,231,817	1,231,817	19.3	8.601	10,594,903	40.00	25.00	0.00	0.00%	0
1959	1,668,314	1,668,314	19.8	8.384	13,986,875	39.00	25.00	0.00	0.00%	0
1960	1,623,567	1,623,556	20.2	8.218	13,342,091	38.00	25.00	0.00	0.00%	0
1961	906,239	905,953	20.3	8.177	7,408,284	37.00	25.00	0.50	2.00%	148,166
1962	657,924	655,800	20.4	8.137	5,336,411	36.00	25.00	0.52	2.09%	111,531
1963	780,562	770,892	20.8	7.981	6,152,313	35.00	25.00	0.59	2.37%	145,810
1964	663,511	646,954	21.5	7.721	4,995,089	34.00	25.00	0.74	2.97%	148,354
1965	533,417	515,756	22.2	7.477	3,856,553	33.00	25.00	0.98	3.94%	151,948
1966	351,075	339,240	23.4	7.094	2,406,573	32.00	25.00	1.32	5.28%	127,067
1967	253,187	245,807	24.6	6.748	1,658,696	31.00	25.00	1.75	7.00%	116,109
1968	309,349	302,264	25.9	6.409	1,937,290	30.00	25.00	2.27	9.09%	176,100

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Pole Lines
Plant Sub-Account:	Pole Lines
Index Number:	2411
Field Code:	PLZA
Survivor Curve:	21
Probable Life:	25

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	344,432	338,533	27.4	6.058	2,050,966	29.00	25.00	2.87	11.50%	235,861
1970	359,702	355,168	29.4	5.646	2,005,372	28.00	25.00	3.55	14.19%	284,562
1971	275,944	273,360	32.9	5.046	1,379,263	27.00	25.00	4.28	17.11%	235,992
1972	225,469	223,854	34.9	4.756	1,064,749	26.00	25.00	5.05	20.21%	215,186
1973	391,115	388,879	37.9	4.380	1,703,270	25.00	25.00	5.86	23.44%	399,246
1974	282,111	280,760	48.9	3.395	953,090	24.00	25.00	6.69	26.75%	254,952
1975	179,398	178,643	52.4	3.168	565,930	23.00	25.00	7.53	30.12%	170,458
1976	1,258,714	1,253,865	55.7	2.980	3,736,834	22.00	25.00	8.38	33.51%	1,252,213
1977	336,676	335,450	59.2	2.804	940,620	21.00	25.00	9.22	36.90%	347,089
1978	372,324	371,012	62.7	2.648	982,263	20.00	25.00	10.07	40.28%	395,656
1979	192,358	191,691	69.8	2.378	455,884	19.00	25.00	10.91	43.63%	198,902
1980	201,271	200,577	78.3	2.120	425,233	18.00	25.00	11.74	46.96%	199,689
1981	228,079	227,291	85.6	1.939	440,774	17.00	25.00	12.56	50.25%	221,489
1982	1,064,249	1,060,548	91.3	1.818	1,928,269	16.00	25.00	13.38	53.51%	1,031,817
1983	1,159,778	1,155,708	95.3	1.742	2,013,090	15.00	25.00	14.18	56.72%	1,141,825
1984	896,010	892,831	100.0	1.660	1,482,099	14.00	25.00	14.97	59.89%	887,629
1985	1,197,865	1,193,563	99.7	1.665	1,987,276	13.00	25.00	15.76	63.02%	1,252,381
1986	1,619,358	1,613,466	99.8	1.663	2,683,722	12.00	25.00	16.53	66.11%	1,774,208
1987	979,344	975,733	98.4	1.687	1,646,054	11.00	25.00	17.29	69.16%	1,138,411
1988	1,315,222	1,310,306	100.0	1.660	2,175,108	10.00	25.00	18.04	72.16%	1,569,558
1989	2,359,475	2,350,534	103.5	1.604	3,769,938	9.00	25.00	18.78	75.13%	2,832,355
1990	1,703,255	1,696,710	110.5	1.502	2,548,904	8.00	25.00	19.51	78.05%	1,989,420
1991	1,665,266	1,658,777	116.3	1.427	2,367,644	7.00	25.00	20.23	80.93%	1,916,135
1992	1,433,073	1,427,410	121.7	1.364	1,947,002	6.00	25.00	20.94	83.77%	1,631,004
1993	1,743,793	1,736,805	128.5	1.292	2,243,655	5.00	25.00	21.64	86.57%	1,942,332
1994	1,824,713	1,817,298	139.2	1.193	2,167,180	4.00	25.00	22.33	89.34%	1,936,158
1995	1,421,157	1,415,300	146.0	1.137	1,609,177	3.00	25.00	23.01	92.06%	1,481,408
1996	753,701	750,551	151.2	1.098	824,017	2.00	25.00	23.69	94.75%	780,756
1997	1,868,693	1,860,772	158.8	1.045	1,945,139	1.00	25.00	24.35	97.39%	1,894,371
1998	0	520,019	166.0	1.000	520,019	0.25	25.00	25.00	100.01%	520,071
	43,818,511	44,148,770		4.513	199,258,373				15.69%	31,256,219

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Aerial Cable Metal
Plant Sub-Account: Aerial Cable Metal
Index Number: 2421
Field Code: ACM
Survivor Curve: 22
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1926	5,778	5,778	20.5	6.571	37,966	72.00	15.00	0.00	0.00%	0
1927	4,458	4,458	20.5	6.571	29,293	71.00	15.00	0.00	0.00%	0
1928	10,542	10,542	20.5	6.571	69,269	70.00	15.00	0.00	0.00%	0
1929	15,879	15,879	20.5	6.571	104,338	69.00	15.00	0.00	0.00%	0
1930	163,800	163,801	20.5	6.571	1,076,295	68.00	15.00	0.00	0.00%	0
1931	1,777	1,777	20.5	6.571	11,676	67.00	15.00	0.00	0.00%	0
1932	1,032	1,032	20.5	6.571	6,781	66.00	15.00	0.00	0.00%	0
1933	1,626	1,626	20.5	6.571	10,684	65.00	15.00	0.00	0.00%	0
1934	2,178	2,178	20.5	6.571	14,311	64.00	15.00	0.00	0.00%	0
1935	4,103	4,103	20.5	6.571	26,960	63.00	15.00	0.00	0.00%	0
1936	5,377	5,377	20.5	6.571	35,331	62.00	15.00	0.00	0.00%	0
1937	2,697	2,697	20.5	6.571	17,721	61.00	15.00	0.00	0.00%	0
1938	3,586	3,586	20.5	6.571	23,563	60.00	15.00	0.00	0.00%	0
1939	8,858	8,858	20.5	6.571	58,204	59.00	15.00	0.00	0.00%	0
1940	7,732	7,732	20.5	6.571	50,805	58.00	15.00	0.00	0.00%	0
1941	18,777	18,777	20.5	6.571	123,380	57.00	15.00	0.00	0.00%	0
1942	17,989	17,989	20.5	6.571	118,202	56.00	15.00	0.50	3.33%	3,936
1943	1,458	1,458	20.5	6.571	9,580	55.00	15.00	0.96	6.41%	614
1944	1,919	1,919	20.5	6.571	12,609	54.00	15.00	1.18	7.86%	991
1945	588	588	20.5	6.571	3,864	53.00	15.00	1.28	8.56%	331
1946	11,397	11,397	20.5	6.571	74,887	52.00	15.00	1.47	9.82%	7,354
1947	9,193	9,193	22.0	6.123	56,287	51.00	15.00	1.49	9.91%	5,578
1948	25,121	25,121	23.6	5.708	143,382	50.00	15.00	1.52	10.11%	14,496
1949	52,463	52,463	25.1	5.367	281,546	49.00	15.00	1.58	10.56%	29,731
1950	66,171	66,171	24.5	5.498	363,807	48.00	15.00	1.64	10.95%	39,837
1951	237,420	237,421	25.8	5.221	1,239,558	47.00	15.00	1.69	11.29%	139,946
1952	171,738	171,738	26.0	5.181	889,735	46.00	15.00	1.76	11.72%	104,277
1953	0	0	26.0	5.181	0	45.00	15.00	1.82	12.12%	0
1954	592,944	592,937	26.3	5.122	3,036,829	44.00	15.00	1.88	12.54%	380,818
1955	689,692	689,676	26.0	5.181	3,573,052	43.00	15.00	1.95	12.99%	464,139
1956	532,466	532,445	27.4	4.916	2,617,529	42.00	15.00	2.02	13.45%	352,058
1957	703,924	703,879	27.2	4.952	3,485,752	41.00	15.00	2.09	13.94%	485,914
1958	1,201,200	1,201,081	27.3	4.934	5,926,212	40.00	15.00	2.17	14.45%	856,338
1959	2,111,589	2,111,277	28.1	4.794	10,120,607	39.00	15.00	2.25	14.98%	1,516,067
1960	3,391,103	3,390,378	27.8	4.845	16,427,478	38.00	15.00	2.33	15.54%	2,552,830
1961	1,558,608	1,558,136	27.6	4.880	7,604,381	37.00	15.00	2.42	16.13%	1,226,587
1962	1,670,336	1,669,634	27.8	4.845	8,089,918	36.00	15.00	2.51	16.75%	1,355,061
1963	1,858,572	1,857,509	27.9	4.828	8,967,972	35.00	15.00	2.61	17.39%	1,559,530
1964	1,512,091	1,510,934	28.2	4.777	7,217,119	34.00	15.00	2.71	18.08%	1,304,855
1965	1,491,201	1,489,700	28.5	4.726	7,040,790	33.00	15.00	2.82	18.79%	1,322,964
1966	1,286,166	1,284,490	30.2	4.460	5,729,164	32.00	15.00	2.93	19.55%	1,120,052
1967	1,220,718	1,218,690	31.1	4.331	5,278,378	31.00	15.00	3.05	20.34%	1,073,622
1968	1,445,127	1,442,113	32.8	4.107	5,922,336	30.00	15.00	3.18	21.18%	1,254,351
1969	1,622,956	1,618,768	34.3	3.927	6,357,088	29.00	15.00	3.31	22.06%	1,402,374

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Aerial Cable Metal
Plant Sub-Account:	Aerial Cable Metal
Index Number:	2421
Field Code:	ACM
Survivor Curve:	22
Probable Life:	15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1970	2,092,142	2,085,559	38.1	3.535	7,373,354	28.00	15.00	3.45	22.99%	1,695,134
1971	1,334,918	1,329,867	40.2	3.351	4,456,047	27.00	15.00	3.60	23.98%	1,068,560
1972	1,686,273	1,678,706	43.1	3.125	5,246,442	26.00	15.00	3.75	25.02%	1,312,660
1973	1,537,885	1,529,809	44.9	3.000	4,589,428	25.00	15.00	3.92	26.12%	1,198,759
1974	1,519,776	1,510,561	50.8	2.652	4,005,367	24.00	15.00	4.09	27.29%	1,093,065
1975	1,102,482	1,094,864	54.5	2.472	2,706,023	23.00	15.00	4.28	28.52%	771,758
1976	922,660	915,489	58.8	2.291	2,097,217	22.00	15.00	4.48	29.84%	625,810
1977	1,204,720	1,194,322	62.0	2.173	2,594,761	21.00	15.00	4.68	31.23%	810,344
1978	1,422,683	1,409,220	64.6	2.085	2,938,421	20.00	15.00	4.91	32.71%	961,158
1979	1,593,787	1,577,462	72.5	1.858	2,930,815	19.00	15.00	5.14	34.28%	1,004,683
1980	1,970,218	1,948,650	80.9	1.665	3,244,539	18.00	15.00	5.39	35.96%	1,166,736
1981	1,946,566	1,924,084	86.6	1.555	2,992,773	17.00	15.00	5.66	37.75%	1,129,772
1982	5,303,064	5,239,282	91.5	1.472	7,712,910	16.00	15.00	5.95	39.66%	3,058,940
1983	3,806,278	3,759,233	95.5	1.410	5,302,290	15.00	15.00	6.26	41.70%	2,211,055
1984	4,334,174	4,279,870	97.6	1.380	5,906,746	14.00	15.00	6.58	43.88%	2,591,880
1985	4,841,446	4,780,819	96.0	1.403	6,708,087	13.00	15.00	6.93	46.22%	3,100,478
1986	5,087,638	5,024,904	97.1	1.387	6,970,695	12.00	15.00	7.31	48.73%	3,396,820
1987	6,418,389	6,341,684	97.8	1.377	8,734,406	11.00	15.00	7.71	51.42%	4,491,231
1988	7,274,734	7,191,914	100.0	1.347	9,687,509	10.00	15.00	8.15	54.31%	5,261,286
1989	6,903,614	6,830,163	106.7	1.262	8,622,521	9.00	15.00	8.61	57.43%	4,951,914
1990	7,703,184	7,628,247	109.7	1.228	9,366,681	8.00	15.00	9.12	60.79%	5,694,005
1991	7,245,074	7,182,281	111.5	1.208	8,676,710	7.00	15.00	9.66	64.42%	5,589,537
1992	6,412,456	6,364,507	113.9	1.183	7,526,769	6.00	15.00	10.25	68.34%	5,143,794
1993	6,557,571	6,517,023	116.3	1.158	7,548,091	5.00	15.00	10.89	72.58%	5,478,404
1994	6,575,264	6,543,631	119.9	1.123	7,351,352	4.00	15.00	11.58	77.18%	5,673,774
1995	8,651,846	8,622,539	129.9	1.037	8,941,155	3.00	15.00	12.33	82.18%	7,347,841
1996	11,066,635	11,045,157	129.8	1.038	11,462,116	2.00	15.00	13.14	87.62%	10,043,106
1997	9,923,754	9,918,809	132.5	1.017	10,083,498	1.00	15.00	14.03	93.54%	9,432,104
1998	0	4,918,258	134.7	1.000	4,918,258	0.25	15.00	15.00	100.00%	4,918,258
	150,181,581	154,112,222		1.901	292,979,623				40.89%	119,797,516

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Aerial Cable Non Metal
Plant Sub-Account: Aerial Cable Non Metal
Index Number: 2421
Field Code: ACN
Survivor Curve: 23
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1985	734	727	116.3	0.589	428	13.00	20.00	11.01	55.06%	236
1986	0	0	111.6	0.614	0	12.00	20.00	11.48	57.42%	0
1987	3,883	3,851	106.4	0.644	2,479	11.00	20.00	11.98	59.91%	1,485
1988	0	0	100.0	0.685	0	10.00	20.00	12.51	62.56%	0
1989	0	0	96.0	0.714	0	9.00	20.00	13.07	65.36%	0
1990	6,079	6,042	95.3	0.719	4,343	8.00	20.00	13.67	68.33%	2,967
1991	151,181	150,365	96.6	0.709	106,625	7.00	20.00	14.30	71.48%	76,216
1992	140,160	139,517	97.3	0.704	98,221	6.00	20.00	14.97	74.83%	73,499
1993	267,983	266,979	81.6	0.839	224,118	5.00	20.00	15.68	78.39%	175,686
1994	1,219,199	1,215,682	75.0	0.913	1,110,323	4.00	20.00	16.44	82.18%	912,463
1995	1,880,207	1,876,426	75.2	0.911	1,709,245	3.00	20.00	17.24	86.21%	1,473,540
1996	1,807,206	1,805,156	75.3	0.910	1,642,141	2.00	20.00	18.10	90.51%	1,486,302
1997	247,777	247,712	71.9	0.953	235,998	1.00	20.00	19.02	95.10%	224,434
1998	0	58,690	68.5	1.000	58,690	0.25	20.00	20.00	100.00%	58,690
	5,724,409	5,771,148		0.900	5,192,612				86.38%	4,485,519

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Underground Cable Metal
Plant Sub-Account: Underground Cable Metal
Index Number: 2422
Field Code: UGM
Survivor Curve: 24
Probable Life: 15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	16,371	16,371	18.2	7.165	117,296	73.00	15.00	0.00	0.00%	0
1926	32,885	32,885	18.2	7.165	235,616	72.00	15.00	0.00	0.00%	0
1927	24,674	24,674	18.2	7.165	176,785	71.00	15.00	0.00	0.00%	0
1928	80,481	80,481	18.2	7.165	576,633	70.00	15.00	0.00	0.00%	0
1929	175,241	175,241	18.2	7.165	1,255,573	69.00	15.00	0.00	0.00%	0
1930	33,298	33,298	18.2	7.165	238,575	68.00	15.00	0.00	0.00%	0
1931	375	375	18.2	7.165	2,687	67.00	15.00	0.00	0.00%	0
1932	1,105	1,105	18.2	7.165	7,917	66.00	15.00	0.00	0.00%	0
1933	13,387	13,387	18.2	7.165	95,916	65.00	15.00	0.00	0.00%	0
1934	37,234	37,234	18.2	7.165	266,775	64.00	15.00	0.00	0.00%	0
1935	11	11	18.2	7.165	79	63.00	15.00	0.00	0.00%	0
1936	6,986	6,986	18.2	7.165	50,054	62.00	15.00	0.00	0.00%	0
1937	64,674	64,674	18.2	7.165	463,379	61.00	15.00	0.00	0.00%	0
1938	15,140	15,140	18.2	7.165	108,476	60.00	15.00	0.00	0.00%	0
1939	20,026	20,026	18.2	7.165	143,483	59.00	15.00	0.00	0.00%	0
1940	75,452	75,452	18.2	7.165	540,601	58.00	15.00	0.00	0.00%	0
1941	117,505	117,505	18.2	7.165	841,904	57.00	15.00	0.00	0.00%	0
1942	29,252	29,252	18.2	7.165	209,586	56.00	15.00	0.00	0.00%	0
1943	61,892	61,892	18.2	7.165	443,446	55.00	15.00	0.00	0.00%	0
1944	0	0	18.2	7.165	0	54.00	15.00	0.00	0.00%	0
1945	4,049	4,049	18.2	7.165	29,010	53.00	15.00	0.00	0.00%	0
1946	10,613	10,613	18.2	7.165	76,040	52.00	15.00	0.00	0.00%	0
1947	321,816	321,816	24.1	5.411	1,741,278	51.00	15.00	0.00	0.00%	0
1948	87,485	87,485	25.5	5.114	447,374	50.00	15.00	0.00	0.00%	0
1949	48,593	48,593	26.0	5.015	243,713	49.00	15.00	0.00	0.00%	0
1950	45,084	45,084	24.5	5.322	239,957	48.00	15.00	0.00	0.00%	0
1951	210,711	210,711	28.0	4.657	981,311	47.00	15.00	0.00	0.00%	0
1952	201,006	201,006	28.2	4.624	929,475	46.00	15.00	0.00	0.00%	0
1953	541,626	541,626	28.1	4.641	2,513,453	45.00	15.00	0.00	0.00%	0
1954	711,776	711,776	28.3	4.608	3,279,703	44.00	15.00	0.00	0.00%	0
1955	1,390,317	1,390,317	31.1	4.193	5,829,496	43.00	15.00	0.00	0.00%	0
1956	1,434,736	1,434,736	33.7	3.869	5,551,619	42.00	15.00	0.00	0.00%	0
1957	2,055,383	2,055,383	32.5	4.012	8,246,829	41.00	15.00	0.00	0.00%	0
1958	1,687,083	1,687,083	30.7	4.248	7,165,981	40.00	15.00	0.00	0.00%	0
1959	1,639,513	1,639,513	31.4	4.153	6,808,678	39.00	15.00	0.00	0.00%	0
1960	3,238,129	3,238,129	32.7	3.988	12,912,906	38.00	15.00	0.00	0.00%	0
1961	1,890,017	1,890,017	31.5	4.140	7,824,070	37.00	15.00	0.00	0.00%	0
1962	1,667,643	1,667,643	31.4	4.153	6,925,498	36.00	15.00	0.00	0.00%	0
1963	1,677,155	1,677,155	32.1	4.062	6,813,116	35.00	15.00	0.00	0.00%	0
1964	2,203,681	2,203,681	33.5	3.893	8,577,911	34.00	15.00	0.00	0.00%	0
1965	2,568,529	2,568,529	36.2	3.602	9,252,381	33.00	15.00	0.00	0.00%	0
1966	2,153,923	2,153,923	38.6	3.378	7,276,465	32.00	15.00	0.00	0.00%	0
1967	2,641,604	2,641,604	40.2	3.244	8,568,785	31.00	15.00	0.00	0.00%	0
1968	2,462,461	2,462,459	43.0	3.033	7,467,549	30.00	15.00	0.50	3.33%	248,669

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Underground Cable Metal
Plant Sub-Account:	Underground Cable Metal
Index Number:	2422
Field Code:	UGM
Survivor Curve:	24
Probable Life:	15

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	4,907,502	4,907,460	45.9	2.841	13,941,890	29.00	15.00	0.56	3.76%	524,215
1970	7,687,335	7,686,958	52.4	2.489	19,129,377	28.00	15.00	0.61	4.08%	780,479
1971	8,452,671	8,451,064	52.4	2.489	21,030,892	27.00	15.00	0.68	4.55%	956,906
1972	9,283,779	9,278,741	55.8	2.337	21,683,652	26.00	15.00	0.78	5.19%	1,125,382
1973	12,624,927	12,609,664	59.9	2.177	27,450,754	25.00	15.00	0.90	6.01%	1,649,790
1974	9,692,523	9,671,145	69.4	1.879	18,171,719	24.00	15.00	1.05	7.03%	1,277,472
1975	4,244,740	4,230,196	70.0	1.863	7,880,250	23.00	15.00	1.24	8.26%	650,909
1976	2,407,485	2,396,221	76.3	1.709	4,095,246	22.00	15.00	1.46	9.72%	398,058
1977	5,496,392	5,464,730	76.0	1.716	9,376,326	21.00	15.00	1.71	11.43%	1,071,714
1978	8,433,724	8,378,656	76.5	1.705	14,282,050	20.00	15.00	2.01	13.39%	1,912,366
1979	10,165,494	10,095,063	84.6	1.541	15,560,239	19.00	15.00	2.34	15.62%	2,430,509
1980	10,320,158	10,248,162	96.3	1.354	13,877,055	18.00	15.00	2.72	18.12%	2,514,522
1981	7,556,711	7,505,785	101.9	1.280	9,605,047	17.00	15.00	3.14	20.90%	2,007,455
1982	18,863,118	18,744,239	104.5	1.248	23,389,941	16.00	15.00	3.59	23.96%	5,604,230
1983	14,535,414	14,451,878	104.7	1.245	17,999,283	15.00	15.00	4.09	27.29%	4,912,004
1984	16,565,065	16,479,891	103.4	1.261	20,783,151	14.00	15.00	4.63	30.88%	6,417,837
1985	19,234,124	19,146,877	99.1	1.316	25,194,277	13.00	15.00	5.21	34.73%	8,749,972
1986	13,851,117	13,796,228	100.0	1.304	17,990,281	12.00	15.00	5.82	38.82%	6,983,827
1987	11,697,277	11,657,026	97.8	1.333	15,542,702	11.00	15.00	6.47	43.13%	6,703,567
1988	10,959,071	10,926,420	100.0	1.304	14,248,052	10.00	15.00	7.15	47.65%	6,789,197
1989	10,277,709	10,251,198	113.7	1.147	11,756,871	9.00	15.00	7.85	52.35%	6,154,722
1990	13,183,785	13,154,270	114.1	1.143	15,033,451	8.00	15.00	8.58	57.22%	8,602,141
1991	7,874,737	7,859,364	114.1	1.143	8,982,130	7.00	15.00	9.34	62.24%	5,590,478
1992	3,375,547	3,369,763	114.2	1.142	3,847,785	6.00	15.00	10.11	67.38%	2,592,638
1993	9,758,430	9,743,631	112.7	1.157	11,273,909	5.00	15.00	10.90	72.64%	8,189,367
1994	10,836,910	10,822,227	112.8	1.156	12,510,801	4.00	15.00	11.70	77.99%	9,757,174
1995	8,655,021	8,644,434	129.9	1.004	8,677,708	3.00	15.00	12.51	83.41%	7,238,076
1996	12,151,804	12,138,238	127.3	1.024	12,433,828	2.00	15.00	13.33	88.90%	11,053,673
1997	10,666,184	10,655,196	129.2	1.009	10,754,161	1.00	15.00	14.17	94.43%	10,155,154
1998	0	7,240,324	130.4	1.000	7,240,324	0.25	15.00	15.00	100.01%	7,241,048
	325,457,676	331,703,971		1.686	559,220,530				25.09%	140,283,551

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Underground Cable Non Metal
Plant Sub-Account: Underground Cable Non Metal
Index Number: 2422
Field Code: UGN
Survivor Curve: 25
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1984	150,106	148,362	152.1	0.410	60,866	14.00	20.00	9.07	45.35%	27,603
1985	6,259,159	6,193,903	148.7	0.420	2,599,190	13.00	20.00	9.76	48.80%	1,268,405
1986	5,318,469	5,268,704	134.3	0.465	2,448,005	12.00	20.00	10.47	52.34%	1,281,286
1987	2,661,373	2,638,996	120.2	0.519	1,369,994	11.00	20.00	11.20	55.98%	766,923
1988	4,048,806	4,018,148	100.0	0.624	2,507,324	10.00	20.00	11.94	59.71%	1,497,123
1989	5,869,770	5,829,619	93.8	0.665	3,878,126	9.00	20.00	12.70	63.51%	2,462,998
1990	4,286,573	4,259,984	91.0	0.686	2,921,132	8.00	20.00	13.48	67.38%	1,968,258
1991	9,289,257	9,236,767	90.4	0.690	6,375,822	7.00	20.00	14.26	71.31%	4,546,598
1992	5,232,667	5,205,594	89.3	0.699	3,637,504	6.00	20.00	15.06	75.30%	2,739,040
1993	7,508,395	7,472,628	74.2	0.841	6,284,259	5.00	20.00	15.87	79.33%	4,985,302
1994	6,578,544	6,549,520	67.8	0.920	6,027,877	4.00	20.00	16.68	83.41%	5,027,852
1995	7,603,136	7,571,877	67.9	0.919	6,958,544	3.00	20.00	17.50	87.52%	6,090,118
1996	9,553,231	9,516,404	68.0	0.918	8,732,700	2.00	20.00	18.33	91.66%	8,004,393
1997	4,392,205	4,376,230	65.2	0.957	4,188,294	1.00	20.00	19.16	95.82%	4,013,223
1998	0	3,337,533	62.4	1.000	3,337,533	0.25	20.00	20.00	100.00%	3,337,533
	78,751,691	81,624,268		0.751	61,327,170				78.30%	48,016,656

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Buried Cable Metal
Plant Sub-Account:	Buried Cable Metal
Index Number:	2423
Field Code:	BCM
Survivor Curve:	26
Probable Life:	20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	1,885	1,885	26.2	5.183	9,770	73.00	20.00	0.00	0.00%	0
1926	0	0	26.2	5.183	0	72.00	20.00	0.00	0.00%	0
1927	0	0	26.2	5.183	0	71.00	20.00	0.00	0.00%	0
1928	0	0	26.2	5.183	0	70.00	20.00	0.00	0.00%	0
1929	0	0	26.2	5.183	0	69.00	20.00	0.00	0.00%	0
1930	0	0	26.2	5.183	0	68.00	20.00	0.00	0.00%	0
1931	0	0	26.2	5.183	0	67.00	20.00	0.00	0.00%	0
1932	0	0	26.2	5.183	0	66.00	20.00	0.00	0.00%	0
1933	0	0	26.2	5.183	0	65.00	20.00	0.00	0.00%	0
1934	0	0	26.2	5.183	0	64.00	20.00	0.00	0.00%	0
1935	0	0	26.2	5.183	0	63.00	20.00	0.00	0.00%	0
1936	5,380	5,380	26.2	5.183	27,886	62.00	20.00	0.00	0.00%	0
1937	27	27	26.2	5.183	140	61.00	20.00	0.00	0.00%	0
1938	555	555	26.2	5.183	2,877	60.00	20.00	0.00	0.00%	0
1939	0	0	26.2	5.183	0	59.00	20.00	0.00	0.00%	0
1940	995	995	26.2	5.183	5,157	58.00	20.00	0.00	0.00%	0
1941	70,882	70,882	26.2	5.183	367,396	57.00	20.00	0.00	0.00%	0
1942	0	0	26.2	5.183	0	56.00	20.00	0.00	0.00%	0
1943	0	0	26.2	5.183	0	55.00	20.00	0.00	0.00%	0
1944	0	0	26.2	5.183	0	54.00	20.00	0.00	0.00%	0
1945	0	0	26.2	5.183	0	53.00	20.00	0.00	0.00%	0
1946	1,108	1,108	26.2	5.183	5,743	52.00	20.00	0.00	0.00%	0
1947	459	459	27.9	4.867	2,234	51.00	20.00	0.00	0.00%	0
1948	3,324	3,324	29.8	4.557	15,148	50.00	20.00	0.00	0.00%	0
1949	13,249	13,249	31.8	4.270	56,579	49.00	20.00	0.00	0.00%	0
1950	1,877	1,877	31.0	4.381	8,222	48.00	20.00	0.00	0.00%	0
1951	3,392	3,392	32.4	4.191	14,217	47.00	20.00	0.00	0.00%	0
1952	61,014	61,014	32.9	4.128	251,845	46.00	20.00	0.00	0.00%	0
1953	57,667	57,667	33.2	4.090	235,879	45.00	20.00	0.00	0.00%	0
1954	325,977	325,977	33.7	4.030	1,313,579	44.00	20.00	0.50	2.50%	32,839
1955	208,298	208,298	33.3	4.078	849,454	43.00	20.00	0.67	3.33%	28,287
1956	462,504	462,503	35.1	3.869	1,789,398	42.00	20.00	0.71	3.56%	63,703
1957	237,709	237,707	34.6	3.925	932,967	41.00	20.00	0.78	3.89%	36,292
1958	189,778	189,775	34.7	3.914	742,691	40.00	20.00	0.85	4.24%	31,490
1959	318,172	318,158	35.7	3.804	1,210,247	39.00	20.00	0.93	4.63%	56,034
1960	915,123	915,030	34.6	3.925	3,591,361	38.00	20.00	1.01	5.07%	182,082
1961	1,398,722	1,398,430	33.7	4.030	5,635,216	37.00	20.00	1.11	5.56%	313,318
1962	1,679,346	1,678,688	33.5	4.054	6,804,951	36.00	20.00	1.22	6.11%	415,783
1963	2,882,802	2,880,855	33.4	4.066	11,713,176	35.00	20.00	1.34	6.72%	787,125
1964	3,275,256	3,271,717	33.0	4.115	13,463,611	34.00	20.00	1.48	7.41%	997,654
1965	3,097,645	3,092,638	33.3	4.078	12,612,020	33.00	20.00	1.63	8.16%	1,029,141
1966	3,809,050	3,800,376	35.5	3.825	14,537,777	32.00	20.00	1.80	9.00%	1,308,400
1967	2,788,688	2,780,207	36.6	3.710	10,315,630	31.00	20.00	1.98	9.92%	1,023,310
1968	4,573,184	4,555,470	38.6	3.518	16,026,758	30.00	20.00	2.18	10.92%	1,750,122
1969	9,238,763	9,195,080	40.3	3.370	30,984,908	29.00	20.00	2.40	12.02%	3,724,386
1970	8,248,563	8,202,719	45.4	2.991	24,535,887	28.00	20.00	2.64	13.22%	3,243,644
1971	19,309,979	19,188,013	46.8	2.902	55,678,039	27.00	20.00	2.90	14.52%	8,084,451
1972	15,052,253	14,947,413	49.9	2.721	40,678,529	26.00	20.00	3.19	15.93%	6,480,090

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Buried Cable Metal
Plant Sub-Account:	Buried Cable Metal
Index Number:	2423
Field Code:	BCM
Survivor Curve:	26
Probable Life:	20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1973	22,261,033	22,094,598	52.0	2.612	57,700,892	25.00	20.00	3.49	17.45%	10,068,806
1974	15,296,676	15,176,840	59.9	2.267	34,407,594	24.00	20.00	3.82	19.09%	6,568,410
1975	8,586,821	8,517,845	62.7	2.166	18,448,537	23.00	20.00	4.17	20.85%	3,846,520
1976	9,518,036	9,441,156	67.7	2.006	18,938,094	22.00	20.00	4.55	22.73%	4,304,629
1977	13,597,969	13,489,459	69.4	1.957	26,395,800	21.00	20.00	4.95	24.75%	6,532,960
1978	19,950,921	19,796,138	70.3	1.932	38,240,620	20.00	20.00	5.38	26.90%	10,286,727
1979	22,186,427	22,021,521	78.5	1.730	38,095,829	19.00	20.00	5.84	29.19%	11,120,173
1980	22,242,686	22,086,426	88.1	1.541	34,044,684	18.00	20.00	6.32	31.61%	10,761,524
1981	22,944,916	22,794,468	95.0	1.429	32,584,092	17.00	20.00	6.84	34.18%	11,137,243
1982	52,179,212	51,863,662	98.5	1.379	71,503,404	16.00	20.00	7.38	36.89%	26,377,606
1983	39,957,010	39,736,676	99.9	1.359	54,016,422	15.00	20.00	7.95	39.75%	21,471,528
1984	55,712,676	55,435,647	100.8	1.347	74,684,136	14.00	20.00	8.55	42.75%	31,927,468
1985	62,308,354	62,032,068	98.9	1.373	85,176,490	13.00	20.00	9.18	45.90%	39,096,009
1986	53,630,025	53,420,374	100.5	1.351	72,183,948	12.00	20.00	9.84	49.20%	35,514,502
1987	60,262,101	60,056,912	98.8	1.374	82,547,861	11.00	20.00	10.53	52.64%	43,453,194
1988	48,732,642	48,590,017	100.0	1.358	65,985,243	10.00	20.00	11.25	56.23%	37,103,502
1989	42,040,178	41,936,004	106.7	1.273	53,373,096	9.00	20.00	11.99	59.97%	32,007,846
1990	35,248,929	35,176,286	107.1	1.268	44,602,611	8.00	20.00	12.77	63.86%	28,483,227
1991	35,746,250	35,686,329	109.1	1.245	44,419,830	7.00	20.00	13.58	67.89%	30,156,623
1992	36,888,484	36,839,636	112.2	1.210	44,588,437	6.00	20.00	14.41	72.06%	32,130,427
1993	34,289,823	34,255,399	112.9	1.203	41,203,572	5.00	20.00	15.27	76.37%	31,467,168
1994	45,516,825	45,484,320	117.3	1.158	52,657,891	4.00	20.00	16.17	80.83%	42,563,373
1995	71,605,888	71,573,426	132.2	1.027	73,522,475	3.00	20.00	17.08	85.42%	62,802,898
1996	93,348,546	93,328,033	131.2	1.035	96,600,205	2.00	20.00	18.03	90.15%	87,085,085
1997	94,510,964	94,509,889	134.0	1.013	95,779,424	1.00	20.00	19.00	95.01%	91,000,031
1998	0	31,598,043	135.8	1.000	31,598,043	0.25	20.00	20.00	100.00%	31,598,043
	1,096,797,018	1,124,812,038		1.456	1,637,718,524				49.36%	808,453,673

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Buried Cable Non Metal
Plant Sub-Account: Buried Cable Non Metal
Index Number: 2423
Field Code: BCN
Survivor Curve: 26
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1985	572,771	572,151	127.9	0.610	348,927	13.00	20.00	9.18	45.90%	160,157
1986	144,757	144,619	120.6	0.647	93,535	12.00	20.00	9.84	49.20%	46,019
1987	1,201,640	1,200,641	113.0	0.690	828,761	11.00	20.00	10.53	52.64%	436,260
1988	1,509,741	1,508,662	100.0	0.780	1,176,756	10.00	20.00	11.25	56.23%	661,690
1989	240,696	240,550	96.4	0.809	194,636	9.00	20.00	11.99	59.97%	116,723
1990	1,871,907	1,870,965	95.1	0.820	1,534,545	8.00	20.00	12.77	63.86%	979,961
1991	3,910,865	3,909,264	95.3	0.818	3,199,608	7.00	20.00	13.58	67.89%	2,172,214
1992	990,542	990,222	95.2	0.819	811,316	6.00	20.00	14.41	72.06%	584,634
1993	1,176,352	1,176,064	83.1	0.939	1,103,887	5.00	20.00	15.27	76.37%	843,038
1994	1,228,277	1,228,063	78.1	0.999	1,226,491	4.00	20.00	16.17	80.83%	991,372
1995	2,359,378	2,359,117	79.1	0.986	2,326,310	3.00	20.00	17.08	85.42%	1,987,134
1996	1,337,436	1,337,365	80.1	0.974	1,302,303	2.00	20.00	18.03	90.15%	1,174,026
1997	252,948	252,947	79.3	0.984	248,801	1.00	20.00	19.00	95.01%	236,386
1998	0	76,189	78.0	1.000	76,189	0.25	20.00	20.00	100.00%	76,189
	16,797,310	16,866,818		0.858	14,472,063				72.32%	10,465,803

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Submarine Cable Metal
Plant Sub-Account: Submarine Cable Metal
Index Number: 2424
Field Code: SBM
Survivor Curve: 27
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1981	1,906	1,906	101.5	1.287	2,452	17.00	20.00	11.58	57.91%	1,420
1982	0	0	104.6	1.249	0	16.00	20.00	12.03	60.16%	0
1983	438	438	104.6	1.249	547	15.00	20.00	12.49	62.45%	342
1984	0	0	105.2	1.241	0	14.00	20.00	12.96	64.78%	0
1985	0	0	102.3	1.277	0	13.00	20.00	13.43	67.14%	0
1986	0	0	103.3	1.264	0	12.00	20.00	13.91	69.53%	0
1987	0	0	99.3	1.315	0	11.00	20.00	14.39	71.95%	0
1988	0	0	100.0	1.306	0	10.00	20.00	14.88	74.40%	0
1989	0	0	106.2	1.230	0	9.00	20.00	15.38	76.88%	0
1990	228	228	106.5	1.226	280	8.00	20.00	15.88	79.38%	222
1991	0	0	109.3	1.195	0	7.00	20.00	16.38	81.90%	0
1992	0	0	112.4	1.162	0	6.00	20.00	16.89	84.44%	0
1993	0	0	117.0	1.116	0	5.00	20.00	17.40	87.00%	0
1994	0	0	122.2	1.069	0	4.00	20.00	17.92	89.58%	0
1995	0	0	127.1	1.028	0	3.00	20.00	18.43	92.17%	0
1996	0	0	126.1	1.036	0	2.00	20.00	18.96	94.78%	0
1997	0	0	128.8	1.014	0	1.00	20.00	19.48	97.39%	0
1998	0	0	130.6	1.000	0	0.25	20.00	20.00	100.01%	0
	2,572	2,572		1.275	3,279				60.50%	1,984

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Intra Building Cable Metal
Plant Sub-Account: Intra Building Cable Metal
Index Number: 2426
Field Code: IBM
Survivor Curve: 28
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	1,658	1,658	20.5	6.317	10,474	73.00	20.00	0.00	0.00%	0
1926	88	88	20.5	6.317	556	72.00	20.00	0.00	0.00%	0
1927	0	0	20.5	6.317	0	71.00	20.00	0.00	0.00%	0
1928	997	997	20.5	6.317	6,298	70.00	20.00	0.00	0.00%	0
1929	1,224	1,224	20.5	6.317	7,732	69.00	20.00	0.00	0.00%	0
1930	1,445	1,445	20.5	6.317	9,128	68.00	20.00	0.00	0.00%	0
1931	581	581	20.5	6.317	3,670	67.00	20.00	0.00	0.00%	0
1932	164	164	20.5	6.317	1,036	66.00	20.00	0.00	0.00%	0
1933	270	270	20.5	6.317	1,706	65.00	20.00	0.00	0.00%	0
1934	219	219	20.5	6.317	1,383	64.00	20.00	0.00	0.00%	0
1935	155	155	20.5	6.317	979	63.00	20.00	0.00	0.00%	0
1936	2,123	2,123	20.5	6.317	13,411	62.00	20.00	0.00	0.00%	0
1937	570,627	570,627	20.5	6.317	3,604,693	61.00	20.00	0.00	0.00%	0
1938	636	636	20.5	6.317	4,018	60.00	20.00	0.00	0.00%	0
1939	453	453	20.5	6.317	2,862	59.00	20.00	0.00	0.00%	0
1940	26,666	26,666	20.5	6.317	168,451	58.00	20.00	0.00	0.00%	0
1941	248	248	20.5	6.317	1,567	57.00	20.00	0.00	0.00%	0
1942	1,303	1,303	20.5	6.317	8,231	56.00	20.00	0.00	0.00%	0
1943	945	945	20.5	6.317	5,970	55.00	20.00	0.00	0.00%	0
1944	595	595	20.5	6.317	3,759	54.00	20.00	0.00	0.00%	0
1945	589	589	20.5	6.317	3,721	53.00	20.00	0.00	0.00%	0
1946	1,724	1,724	20.5	6.317	10,891	52.00	20.00	0.00	0.00%	0
1947	403	403	22.0	5.886	2,372	51.00	20.00	0.00	0.00%	0
1948	4,019	4,019	23.6	5.487	22,053	50.00	20.00	0.00	0.00%	0
1949	1,613	1,613	25.1	5.159	8,322	49.00	20.00	0.00	0.00%	0
1950	1,540	1,540	24.5	5.286	8,140	48.00	20.00	0.00	0.00%	0
1951	7,013	7,013	25.8	5.019	35,201	47.00	20.00	0.50	2.50%	880
1952	8,797	8,797	26.0	4.981	43,816	46.00	20.00	0.67	3.33%	1,459
1953	6,763	6,763	26.0	4.981	33,685	45.00	20.00	0.66	3.30%	1,112
1954	18,337	18,337	26.3	4.924	90,290	44.00	20.00	0.71	3.54%	3,196
1955	22,512	22,512	26.0	4.981	112,125	43.00	20.00	0.78	3.91%	4,384
1956	24,284	24,283	27.4	4.726	114,768	42.00	20.00	0.87	4.34%	4,981
1957	33,788	33,785	27.2	4.761	160,849	41.00	20.00	0.97	4.86%	7,817
1958	31,393	31,387	27.3	4.744	148,885	40.00	20.00	1.09	5.46%	8,129
1959	726,673	726,414	28.1	4.609	3,347,710	39.00	20.00	1.23	6.16%	206,219
1960	610,112	609,768	27.8	4.658	2,840,467	38.00	20.00	1.39	6.95%	197,412
1961	557,294	556,838	27.6	4.692	2,612,702	37.00	20.00	1.57	7.84%	204,836
1962	534,220	533,631	27.8	4.658	2,485,799	36.00	20.00	1.77	8.84%	219,745
1963	120,030	119,862	27.9	4.642	556,350	35.00	20.00	1.99	9.95%	55,357
1964	574,180	573,216	28.2	4.592	2,632,321	34.00	20.00	2.24	11.18%	294,293
1965	617,582	616,390	28.5	4.544	2,800,789	33.00	20.00	2.51	12.53%	350,939
1966	525,534	524,411	30.2	4.288	2,248,715	32.00	20.00	2.80	14.00%	314,820
1967	1,313,988	1,310,975	31.1	4.164	5,458,883	31.00	20.00	3.12	15.60%	851,586
1968	120,268	119,980	32.8	3.948	473,701	30.00	20.00	3.46	17.32%	82,045

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Intra Building Cable Metal
Plant Sub-Account: Intra Building Cable Metal
Index Number: 2426
Field Code: IBM
Survivor Curve: 28
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	1,024,579	1,022,069	34.3	3.776	3,858,830	29.00	20.00	3.83	19.16%	739,352
1970	324,812	324,013	38.1	3.399	1,101,302	28.00	20.00	4.23	21.13%	232,705
1971	304,398	303,656	40.2	3.221	978,196	27.00	20.00	4.64	23.22%	227,137
1972	873,628	871,543	43.1	3.005	2,618,674	26.00	20.00	5.08	25.42%	665,667
1973	1,687,846	1,683,936	44.9	2.884	4,856,788	25.00	20.00	5.55	27.73%	1,346,787
1974	503,212	502,088	50.8	2.549	1,279,929	24.00	20.00	6.03	30.15%	385,899
1975	457,982	457,000	54.5	2.376	1,085,898	23.00	20.00	6.53	32.66%	354,654
1976	1,489,259	1,486,200	58.5	2.214	3,289,964	22.00	20.00	7.05	35.26%	1,160,041
1977	704,926	703,541	62.0	2.089	1,469,493	21.00	20.00	7.59	37.95%	557,672
1978	409,126	408,357	64.5	2.008	819,879	20.00	20.00	8.14	40.71%	333,773
1979	810,948	809,488	72.5	1.786	1,445,913	19.00	20.00	8.71	43.54%	629,550
1980	1,039,331	1,037,534	80.9	1.601	1,660,825	18.00	20.00	9.28	46.42%	770,955
1981	619,110	618,080	86.6	1.495	924,265	17.00	20.00	9.87	49.36%	456,217
1982	2,219,147	2,215,581	91.5	1.415	3,135,712	16.00	20.00	10.47	52.33%	1,640,918
1983	1,979,619	1,976,535	95.5	1.356	2,680,222	15.00	20.00	11.07	55.33%	1,482,967
1984	2,202,424	2,199,084	97.6	1.327	2,917,842	14.00	20.00	11.67	58.36%	1,702,853
1985	1,939,607	1,936,733	96.0	1.349	2,612,572	13.00	20.00	12.28	61.41%	1,604,381
1986	2,637,981	2,634,146	97.1	1.334	3,513,099	12.00	20.00	12.89	64.47%	2,264,895
1987	2,116,436	2,113,406	97.8	1.324	2,798,426	11.00	20.00	13.51	67.53%	1,889,777
1988	1,406,112	1,404,122	100.0	1.295	1,818,337	10.00	20.00	14.12	70.59%	1,283,564
1989	1,195,100	1,193,422	105.8	1.224	1,460,757	9.00	20.00	14.73	73.63%	1,075,555
1990	1,044,385	1,042,925	107.9	1.200	1,251,703	8.00	20.00	15.33	76.67%	959,681
1991	837,912	836,742	109.0	1.188	994,111	7.00	20.00	15.94	79.69%	792,207
1992	624,685	623,812	111.5	1.161	724,517	6.00	20.00	16.54	82.68%	599,031
1993	480,052	479,379	111.1	1.166	558,772	5.00	20.00	17.13	85.65%	478,588
1994	511,786	511,064	115.0	1.126	575,502	4.00	20.00	17.72	88.59%	509,838
1995	798,812	797,676	123.1	1.052	839,148	3.00	20.00	18.30	91.50%	767,820
1996	995,102	993,673	123.6	1.048	1,041,106	2.00	20.00	18.88	94.38%	982,596
1997	1,314,086	1,312,178	127.2	1.018	1,335,905	1.00	20.00	19.44	97.21%	1,298,633
1998	0	570,105	129.5	1.000	570,105	0.25	20.00	20.00	100.01%	570,162
	39,025,456	39,532,732		2.133	84,326,269				36.26%	30,573,086

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Intra Building Cable Non Metal
Plant Sub-Account: Intra Building Cable Non Metal
Index Number: 2426
Field Code: IBN
Survivor Curve: 28
Probable Life: 20

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1985	13,709	13,681	116.3	0.726	9,928	13.00	20.00	12.28	61.41%	6,097
1986	17,020	16,985	111.6	0.756	12,846	12.00	20.00	12.89	64.47%	8,282
1987	4,417	4,408	106.4	0.793	3,497	11.00	20.00	13.51	67.53%	2,361
1988	21,088	21,046	100.0	0.844	17,763	10.00	20.00	14.12	70.59%	12,539
1989	6,347	6,335	95.8	0.881	5,581	9.00	20.00	14.73	73.63%	4,109
1990	14,010	13,983	93.9	0.899	12,568	8.00	20.00	15.33	76.67%	9,636
1991	22,676	22,632	95.4	0.885	20,022	7.00	20.00	15.94	79.69%	15,956
1992	17,812	17,777	95.7	0.882	15,678	6.00	20.00	16.54	82.68%	12,963
1993	30,377	30,317	88.3	0.956	28,978	5.00	20.00	17.13	85.65%	24,820
1994	39,320	39,242	85.9	0.983	38,557	4.00	20.00	17.72	88.59%	34,158
1995	70,539	70,399	85.5	0.987	69,493	3.00	20.00	18.30	91.50%	63,586
1996	90,078	89,897	86.6	0.975	87,613	2.00	20.00	18.88	94.38%	82,689
1997	49,653	49,552	85.5	0.987	48,915	1.00	20.00	19.44	97.21%	47,550
1998	0	27,128	84.4	1.000	27,128	0.25	20.00	20.00	100.01%	27,131
	397,046	423,382		0.941	398,567				88.29%	351,876

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Aerial Wire
Plant Sub-Account:	Aerial Wire
Index Number:	2431
Field Code:	AWZ
Survivor Curve:	29
Probable Life:	9

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1952	4	4	24.1	5.485	22	46.00	9.00	3.73	41.49%	9
1953	11	11	25.6	5.164	57	45.00	9.00	3.76	41.74%	24
1954	150	150	26.4	5.008	751	44.00	9.00	3.78	42.00%	315
1955	774	774	26.8	4.933	3,818	43.00	9.00	3.81	42.28%	1,614
1956	1,416	1,416	27.9	4.738	6,709	42.00	9.00	3.83	42.56%	2,856
1957	2,936	2,936	27.5	4.807	14,114	41.00	9.00	3.86	42.86%	6,049
1958	4,484	4,484	28.1	4.705	21,095	40.00	9.00	3.89	43.17%	9,107
1959	7,495	7,495	28.5	4.639	34,765	39.00	9.00	3.91	43.50%	15,123
1960	11,067	11,066	29.0	4.559	50,448	38.00	9.00	3.95	43.84%	22,116
1961	15,670	15,669	29.1	4.543	71,184	37.00	9.00	3.98	44.20%	31,463
1962	23,829	23,827	27.9	4.738	112,901	36.00	9.00	4.01	44.58%	50,331
1963	9,311	9,310	27.4	4.825	44,919	35.00	9.00	4.05	44.98%	20,205
1964	10,872	10,871	27.7	4.773	51,881	34.00	9.00	4.09	45.40%	23,554
1965	12,354	12,352	28.0	4.721	58,320	33.00	9.00	4.13	45.84%	26,734
1966	18,355	18,352	29.2	4.527	83,085	32.00	9.00	4.17	46.30%	38,468
1967	17,755	17,751	30.7	4.306	76,438	31.00	9.00	4.21	46.79%	35,766
1968	15,050	15,046	32.9	4.018	60,457	30.00	9.00	4.26	47.31%	28,602
1969	16,065	16,059	35.8	3.693	59,303	29.00	9.00	4.31	47.85%	28,376
1970	26,779	26,767	39.0	3.390	90,734	28.00	9.00	4.36	48.42%	43,934
1971	54,524	54,495	40.4	3.272	178,322	27.00	9.00	4.41	49.03%	87,432
1972	63,847	63,806	42.1	3.140	200,359	26.00	9.00	4.47	49.67%	99,518
1973	79,355	79,293	43.5	3.039	240,977	25.00	9.00	4.53	50.35%	121,332
1974	107,922	107,820	52.6	2.513	270,986	24.00	9.00	4.60	51.07%	138,392
1975	87,186	87,088	56.2	2.352	204,858	23.00	9.00	4.67	51.84%	106,198
1976	68,540	68,448	59.4	2.226	152,337	22.00	9.00	4.74	52.65%	80,206
1977	71,550	71,436	63.6	2.079	148,489	21.00	9.00	4.82	53.52%	79,471
1978	86,945	86,782	66.0	2.003	173,828	20.00	9.00	4.90	54.44%	94,632
1979	151,177	150,846	70.7	1.870	282,063	19.00	9.00	4.99	55.42%	156,319
1980	299,327	298,564	80.1	1.650	492,762	18.00	9.00	5.08	56.47%	278,263
1981	191,616	191,052	84.1	1.572	300,322	17.00	9.00	5.18	57.59%	172,955
1982	148,131	147,630	89.0	1.485	219,289	16.00	9.00	5.29	58.80%	128,942
1983	231,182	230,292	92.1	1.435	330,560	15.00	9.00	5.41	60.08%	198,600
1984	132,970	132,391	96.1	1.376	182,123	14.00	9.00	5.53	61.47%	111,951
1985	194,711	193,759	95.2	1.389	269,065	13.00	9.00	5.67	62.96%	169,403
1986	236,914	235,626	92.8	1.425	335,665	12.00	9.00	5.81	64.57%	216,739
1987	286,979	285,258	95.9	1.379	393,234	11.00	9.00	5.97	66.30%	260,714
1988	269,744	267,978	100.0	1.322	354,266	10.00	9.00	6.14	68.18%	241,539
1989	249,384	247,619	107.0	1.236	305,937	9.00	9.00	6.32	70.22%	214,829
1990	329,639	327,145	109.8	1.204	393,885	8.00	9.00	6.52	72.44%	285,331
1991	439,464	435,953	109.4	1.208	526,810	7.00	9.00	6.74	74.85%	394,317
1992	308,201	305,635	111.5	1.186	362,376	6.00	9.00	6.97	77.50%	280,841
1993	476,028	471,956	114.0	1.160	547,303	5.00	9.00	7.24	80.39%	439,977
1994	501,477	497,141	117.5	1.125	559,336	4.00	9.00	7.52	83.57%	467,437
1995	477,945	473,844	126.5	1.045	495,195	3.00	9.00	7.84	87.08%	431,216

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Aerial Wire
Plant Sub-Account: Aerial Wire
Index Number: 2431
Field Code: AWZ
Survivor Curve: 29
Probable Life: 9

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1996	606,284	601,230	127.2	1.039	624,863	2.00	9.00	8.19	90.97%	568,438
1997	1,015,182	1,007,166	130.1	1.016	1,023,424	1.00	9.00	8.57	95.28%	975,118
1998	0	414,029	132.2	1.000	414,029	0.25	9.00	9.01	100.08%	414,360
	7,360,601	7,728,621		1.400	10,823,662				70.21%	7,599,116

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account: Conduit Systems
Plant Sub-Account: Conduit Systems
Index Number: 2441
Field Code: UCZ
Survivor Curve: 30
Probable Life: 60

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	417,529	414,398	10.4	10.625	4,402,978	73.00	60.00	4.21	7.02%	309,089
1926	230,343	228,500	10.4	10.625	2,427,808	72.00	60.00	4.51	7.51%	182,328
1927	97,699	96,876	10.4	10.625	1,029,304	71.00	60.00	4.82	8.03%	82,653
1928	353,800	350,699	10.4	10.625	3,726,174	70.00	60.00	5.14	8.57%	319,333
1929	367,005	363,696	10.4	10.625	3,864,267	69.00	60.00	5.49	9.14%	353,194
1930	200,903	199,058	10.4	10.625	2,114,996	68.00	60.00	5.85	9.74%	206,001
1931	3,934	3,898	10.4	10.625	41,412	67.00	60.00	6.22	10.37%	4,294
1932	8,275	8,198	10.4	10.625	87,107	66.00	60.00	6.62	11.03%	9,608
1933	124,463	123,319	10.4	10.625	1,310,262	65.00	60.00	7.03	11.71%	153,432
1934	957	948	10.4	10.625	10,076	64.00	60.00	7.46	12.43%	1,252
1935	3,906	3,871	10.4	10.625	41,133	63.00	60.00	7.90	13.17%	5,417
1936	100,662	99,793	10.4	10.625	1,060,304	62.00	60.00	8.37	13.95%	147,912
1937	8,638	8,566	10.4	10.625	91,012	61.00	60.00	8.85	14.75%	13,424
1938	1,310	1,299	10.4	10.625	13,807	60.00	60.00	9.35	15.58%	2,151
1939	14,005	13,897	10.4	10.625	147,656	59.00	60.00	9.87	16.44%	24,275
1940	4,885	4,849	10.4	10.625	51,521	58.00	60.00	10.40	17.33%	8,929
1941	68,833	68,351	10.4	10.625	726,231	57.00	60.00	10.95	18.26%	132,610
1942	326	324	10.4	10.625	3,441	56.00	60.00	11.52	19.20%	661
1943	51,919	51,594	10.4	10.625	548,182	55.00	60.00	12.11	20.18%	110,623
1944	73	73	10.4	10.625	771	54.00	60.00	12.71	21.19%	163
1945	40,135	39,912	10.4	10.625	424,070	53.00	60.00	13.33	22.22%	94,228
1946	61,972	61,650	10.4	10.625	655,031	52.00	60.00	13.97	23.28%	152,491
1947	993,548	988,722	11.8	9.364	9,258,793	51.00	60.00	14.62	24.37%	2,256,368
1948	540,497	538,047	12.7	8.701	4,681,436	50.00	60.00	15.29	25.48%	1,192,830
1949	154,809	154,156	13.3	8.308	1,280,767	49.00	60.00	15.97	26.61%	340,812
1950	159,461	158,835	13.6	8.125	1,290,538	48.00	60.00	16.67	27.78%	358,511
1951	247,444	246,543	14.3	7.727	1,905,105	47.00	60.00	17.38	28.96%	551,718
1952	1,773,318	1,767,334	15.0	7.367	13,019,362	46.00	60.00	18.10	30.17%	3,927,942
1953	583,207	581,386	15.7	7.038	4,091,919	45.00	60.00	18.84	31.40%	1,284,863
1954	392,260	391,128	16.2	6.821	2,667,878	44.00	60.00	19.59	32.65%	871,062
1955	1,792,836	1,788,059	16.5	6.697	11,974,576	43.00	60.00	20.36	33.93%	4,062,974
1956	1,329,022	1,325,756	17.5	6.314	8,371,204	42.00	60.00	21.13	35.22%	2,948,338
1957	1,407,201	1,404,016	18.1	6.105	8,571,476	41.00	60.00	21.92	36.54%	3,132,017
1958	1,386,689	1,383,800	18.8	5.878	8,133,506	40.00	60.00	22.72	37.87%	3,080,159
1959	1,668,833	1,665,636	19.1	5.785	9,636,271	39.00	60.00	23.53	39.22%	3,779,346
1960	6,236,128	6,225,152	19.3	5.725	35,641,415	38.00	60.00	24.35	40.59%	14,466,850
1961	1,055,739	1,054,033	19.5	5.667	5,972,855	37.00	60.00	25.19	41.98%	2,507,404
1962	1,374,598	1,372,561	19.9	5.553	7,621,505	36.00	60.00	26.03	43.38%	3,306,209
1963	1,242,168	1,240,480	20.1	5.498	6,819,557	35.00	60.00	26.88	44.80%	3,055,161
1964	1,936,506	1,934,096	20.7	5.338	10,324,523	34.00	60.00	27.74	46.23%	4,773,027
1965	1,618,467	1,616,624	21.2	5.212	8,426,269	33.00	60.00	28.60	47.67%	4,016,802
1966	1,677,857	1,676,109	21.9	5.046	8,457,079	32.00	60.00	29.48	49.13%	4,154,963
1967	1,180,191	1,179,067	23.5	4.702	5,544,124	31.00	60.00	30.36	50.60%	2,805,327
1968	1,523,335	1,522,010	24.8	4.456	6,781,536	30.00	60.00	31.25	52.09%	3,532,502

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Proposed Survivor Curves

Plant Account:	Conduit Systems
Plant Sub-Account:	Conduit Systems
Index Number:	2441
Field Code:	UCZ
Survivor Curve:	30
Probable Life:	60

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1969	2,675,497	2,673,372	26.5	4.170	11,147,459	29.00	60.00	32.15	53.58%	5,972,808
1970	6,667,439	6,662,609	28.3	3.905	26,014,782	28.00	60.00	33.05	55.09%	14,331,543
1971	5,200,035	5,196,602	31.1	3.553	18,463,810	27.00	60.00	33.96	56.61%	10,452,363
1972	2,422,039	2,420,582	33.5	3.299	7,984,309	26.00	60.00	34.88	58.13%	4,641,279
1973	6,866,367	6,862,609	36.0	3.069	21,064,396	25.00	60.00	35.80	59.67%	12,569,125
1974	6,598,761	6,595,476	41.0	2.695	17,775,613	24.00	60.00	36.73	61.22%	10,882,230
1975	2,154,193	2,153,219	45.9	2.407	5,183,675	23.00	60.00	37.66	62.77%	3,253,793
1976	1,150,587	1,150,115	50.0	2.210	2,541,753	22.00	60.00	38.60	64.33%	1,635,110
1977	1,579,611	1,579,023	53.0	2.085	3,292,114	21.00	60.00	39.54	65.90%	2,169,503
1978	2,798,575	2,797,631	56.6	1.952	5,461,807	20.00	60.00	40.49	67.48%	3,685,627
1979	4,571,234	4,569,840	63.6	1.737	7,939,737	19.00	60.00	41.43	69.06%	5,483,182
1980	2,855,603	2,854,816	69.3	1.595	4,552,051	18.00	60.00	42.39	70.65%	3,216,024
1981	1,546,247	1,545,863	74.6	1.481	2,289,783	17.00	60.00	43.35	72.24%	1,654,139
1982	10,721,271	10,718,870	79.3	1.393	14,936,130	16.00	60.00	44.31	73.84%	11,028,838
1983	7,567,337	7,565,813	81.3	1.359	10,283,178	15.00	60.00	45.27	75.45%	7,758,658
1984	7,318,527	7,317,205	83.8	1.319	9,648,581	14.00	60.00	46.24	77.06%	7,435,197
1985	9,719,510	9,717,938	84.9	1.302	12,648,199	13.00	60.00	47.21	78.68%	9,951,603
1986	10,029,069	10,027,621	94.9	1.164	11,675,997	12.00	60.00	48.18	80.30%	9,375,825
1987	10,276,394	10,275,073	95.3	1.159	11,913,909	11.00	60.00	49.15	81.92%	9,759,874
1988	14,955,495	14,953,789	100.0	1.105	16,523,937	10.00	60.00	50.13	83.55%	13,805,750
1989	18,445,210	18,443,351	102.4	1.079	19,902,249	9.00	60.00	51.11	85.18%	16,952,735
1990	24,324,507	24,322,350	97.9	1.129	27,452,704	8.00	60.00	52.09	86.82%	23,834,438
1991	14,699,400	14,698,260	98.9	1.117	16,422,222	7.00	60.00	53.07	88.45%	14,525,455
1992	8,198,244	8,197,691	99.5	1.111	9,103,969	6.00	60.00	54.06	90.10%	8,202,676
1993	12,525,255	12,524,527	100.1	1.104	13,825,777	5.00	60.00	55.04	91.74%	12,683,768
1994	10,672,008	10,671,478	100.5	1.100	11,733,317	4.00	60.00	56.03	93.39%	10,957,745
1995	13,581,348	13,580,779	108.6	1.017	13,818,381	3.00	60.00	57.02	95.04%	13,132,989
1996	19,208,244	19,207,576	106.0	1.042	20,022,991	2.00	60.00	58.01	96.69%	19,360,230
1997	11,904,252	11,903,915	109.4	1.010	12,023,607	1.00	60.00	59.01	98.34%	11,824,015
1998	0	5,345,213	110.5	1.000	5,345,213	0.25	60.00	60.00	100.00%	5,345,213
	283,667,945	288,890,525		1.988	574,240,889				62.45%	358,600,993

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Summary - Proposed Survivor Curves

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1925	520,133	516,812			5,529,893					371,901
1926	301,495	299,668			3,138,641					184,474
1927	206,453	205,669			2,308,552					88,121
1928	592,821	589,366			6,199,666					442,935
1929	647,377	644,083			6,432,118					355,490
1930	499,459	497,554			4,778,761					226,447
1931	27,722	27,686			348,299					4,294
1932	38,359	38,275			480,614					12,048
1933	166,453	165,309			1,784,961					153,432
1934	62,460	62,451			592,608					1,252
1935	65,458	65,423			855,017					5,417
1936	170,851	170,001			1,854,121					159,793
1937	739,339	739,055			5,357,608					88,332
1938	71,604	71,578			822,389					16,914
1939	94,215	94,107			1,050,132					24,275
1940	245,553	245,522			2,578,384					10,591
1941	414,142	413,660			3,950,980					132,646
1942	186,125	185,772			2,022,088					158,178
1943	166,174	165,782			1,664,977					137,940
1944	62,935	62,973			822,501					13,489
1945	182,530	182,307			2,342,487					94,559
1946	343,237	342,482			4,040,963					395,497
1947	1,701,264	1,691,416			14,680,514					2,534,818
1948	1,195,737	1,191,084			10,543,810					2,016,365
1949	1,250,921	1,245,516			10,746,274					2,280,630
1950	856,401	855,290			6,765,097					652,258
1951	1,266,522	1,264,371			9,579,326					1,159,952
1952	2,944,329	2,936,415			21,655,622					4,763,425
1953	2,086,428	2,082,355			14,770,613					2,100,335
1954	3,112,667	3,110,548			20,122,433					1,880,170
1955	6,342,104	6,333,489			34,586,625					6,410,750
1956	5,043,346	5,037,023			28,491,075					4,647,316
1957	6,555,865	6,545,042			36,810,999					6,445,314
1958	6,495,941	6,489,243			37,220,849					5,675,228
1959	8,966,587	8,957,702			49,906,869					7,526,657
1960	18,464,386	18,439,684			99,096,157					23,269,055
1961	9,736,556	9,723,028			50,626,117					10,050,772
1962	8,109,857	8,102,435			40,160,005					6,503,062
1963	9,942,266	9,922,597			47,593,535					7,975,963
1964	11,295,666	11,264,977			53,170,786					10,233,091
1965	10,258,990	10,230,624			45,557,048					7,524,237
1966	10,631,014	10,604,389			43,711,461					8,235,470
1967	10,099,070	10,073,311			39,775,804					7,185,402
1968	11,561,993	11,527,418			43,549,150					9,394,207
1969	21,298,484	21,233,995			73,819,044					15,065,315
1970	28,508,608	28,428,449			91,901,556					26,283,792
1971	41,056,390	40,895,956			119,749,565					29,523,299
1972	38,968,479	38,803,264			103,465,618					27,259,876
1973	58,053,160	57,796,005			148,085,405					43,687,789
1974	39,149,327	38,937,364			87,572,740					25,512,614
1975	23,848,270	23,727,239			48,851,217					15,578,121
1976	20,075,314	19,951,605			40,168,557					11,581,394
1977	28,977,400	28,776,917			54,087,458					16,048,535
1978	40,537,591	40,186,875			73,843,392					22,411,385
1979	52,959,937	52,565,568			86,517,535					30,450,174
1980	57,240,488	56,788,308			82,135,164					30,921,151
1981	67,428,888	66,771,168			87,601,914					36,857,041
1982	159,976,566	158,820,074			194,486,671					89,013,064
1983	118,711,158	117,150,394			142,465,167					61,627,515
1984	155,212,308	152,963,007			180,328,438					80,161,711

U S West Communications - Arizona
Reproduction Cost New Less Depreciation
Telephone Plant in Service as of June 30, 1998
Summary - Proposed Survivor Curves

Year of Placing	Original Cost as of 12/31/97	Original Cost as of 6/30/98	Telephone Plant Index	Telephone Plant Translator	Reproduction Cost New	Age as of 6/30/98	Life Expectancy When New	Life Expectancy 6/30/98	Condition Percent	Reproduction Cost New Less Depreciation
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1985	209,019,532	206,436,433			233,822,069					112,637,566
1986	216,602,896	213,633,649			224,471,705					108,696,808
1987	214,081,370	210,806,181			228,761,549					115,925,833
1988	227,368,836	223,187,224			235,067,036					126,145,092
1989	254,608,431	247,031,131			230,018,060					127,482,821
1990	219,404,429	216,119,597			218,285,571					132,003,547
1991	220,043,389	217,201,246			212,476,600					134,701,938
1992	204,995,269	200,541,279			195,727,607					128,444,838
1993	215,136,402	206,250,022			202,389,112					140,501,889
1994	262,644,001	255,364,724			249,571,562					183,944,415
1995	336,016,407	332,173,687			322,706,256					255,875,693
1996	383,554,111	380,232,097			372,769,559					319,604,181
1997	326,267,901	324,152,581			321,979,955					297,935,691
1998	0	132,424,687			132,424,687					132,426,985
	4,395,468,147	4,462,764,221			5,813,626,702					3,019,852,578

Appendix B

REDACTED

Appendix C
DEPRECIATION PARAMETERS

R·W·BECK

U S WEST Communications, Inc.
1998 RCNLD Study

Index to Survivor Curves - Company Proposal

Curve #	Account	Category
C1	2112	Motor Vehicles - Passenger Cars
C2	2112	Motor Vehicles - Light Trucks
C3	2112	Motor Vehicles - Heavy Trucks
C4	2114	Special Purpose Vehicles
C4	2115	Garage Work Equipment
C4	2116	Other Work Equipment
C5	2121	Buildings - Large Buildings
C6	2121	Buildings - Other Buildings
C7	2122	Furniture
C8	2123.1	Office Equipment
C9	2123.2	Company Communications Equipment - Stand Alone
C10	2123.2	Company Communications Equipment - PBX & Key Intrasystems
C11	2124	General Purpose Computer
C12	2211	Analog Switching Equipment
C13	2212	Digital Switching Equipment
C14	2220	Operator Systems
C15	2231	Radio Systems
C16	2232	Circuit DDS
C17	2232	Circuit Digital
C18	2232	Circuit Analog
C19	2351	Public Telephone Terminal Equipment
C20	2362	Other Terminal Equipment
C21	2411	Pole Lines
C22	2421	Aerial Cable Metallic
C23	2421	Aerial Cable Non-Metallic
C24	2422	Underground Cable Metallic
C25	2422	Underground Cable Non-Metallic
C26	2423	Buried Cable Metallic
C26	2423	Buried Cable Non-Metallic
C27	2424	Submarine Cable Metallic
C27	2424	Submarine Cable Non-Metallic
C28	2426	Intrabuilding Cable Metallic
C28	2426	Intrabuilding Cable Non-Metallic
C29	2431	Aerial Wire
C30	2441	Conduit Systems

10/28/97
09:55 AM
XREF: 03
PRES: 1991,SF,02
PROP: 1997,SG,04
COMPANY PROPOSAL - SR

COMPANY: U S WEST COMMUNICATIONS
STATE: ARIZONA
PAGE 1 OF 1

PARAMETER REPORT

COMPANY PROPOSAL - SR

CATEGORY	FIRST ELG YEAR	P.L. OR AYFR	AVG. NET SALV.	FUTURE NET SALV.	C	G	S	COMMENTS
2112 MOTOR VEHICLES			15	16				
2112 PASSENGER CARS	1983	7.0	15.4	16.0	1.6400000E+000	-1.0237949E-003	+7.1895511E-003	
2112 LIGHT TRUCKS	1983	8.5	15.4	16.0	1.1900000E+000	-7.2193521E-002	+2.2835267E-002	
2112 HEAVY TRUCKS	1983	10.0	15.4	16.0	1.4000000E+000	-1.3553290E-003	+4.6628920E-004	
2114 SPEC PURPOSE VEHICLES	0	15.0	0	0	1.0707877E+000	-4.1693200E-002	-1.4042788E-002	
2115 GARAGE WORK EQUIP	0	15.0	-24	-4	1.0707877E+000	-4.1693200E-002	-1.4042788E-002	
2116 OTHER WORK EQUIP	0	15.0	9	7	1.0707877E+000	-4.1693200E-002	-1.4042788E-002	
2121 BUILDINGS			2	-6				
2121 LARGE BUILDINGS	1983	50.0	2.0	-6.0	BELL CURVE GM	3.0		
2121 OTHER BUILDINGS	1983	30.0	2.0	-6.0	BELL CURVE GM	2.5		
2122 FURNITURE	1983	15.0	3	0	8.7000000E-001	-1.2853924E-001	-1.7497867E-002	
2123.1 OFFICE EQUIPMENT	1983	10.0	0	0	1.0200000E+000	-1.5163714E+000	+2.9173914E-002	
2123.2 COMPANY COMM EQUIP			0	0				
2123.2 STAND ALONE	0	7.0	-0.1	0.0	1.3685913E+000	-3.1717800E-002	+9.9439780E-003	
2123.2 PBX & KEY INTRASYSTEMS	0	7.0	-0.1	0.0	5.2600000E+000	-3.8844032E-006	-3.5662734E-002	
2124 GEN PURPOSE CMPTR	1983	5.0	6	5	1.2100000E+000	-8.8522478E-002	+1.7463501E-002	
2211 ANALOG SW EQUIP	0	1999.8	6	0	CONSTANT RETIREMENT RATE 1.5			
2212 DIGITAL SW EQUIP	1983	10.0	3	3	1.1400000E+000	-5.1034240E-002	+3.5574240E-003	
2220 OPERATOR SYSTEMS	1983	8.0	-3	-2	1.4400000E+000	-4.8100604E-006	-4.6772590E-005	
2231 RADIO SYSTEMS	1983	15.0	-1	-2	1.0400000E+000	-1.1530509E+000	+4.5933023E-002	
2232 CIRCUIT DDS	1983	8.0	8	3	7.3000000E-001	-4.4457536E-001	-8.0978133E-002	
2232 CIRCUIT DIGITAL	1983	10.0	2	2	9.8000000E-001	-3.7370833E+000	-7.3343077E-002	
2232 CIRCUIT ANALOG	1983	7.0	-1	0	1.0200000E+000	-2.4613326E+000	+4.5886627E-002	
2351 PUB TEL TERM EQUIP	0	7.0	19	5	1.2144679E+000	-1.2765361E-001	+6.8596935E-004	
2362 OTHER TERM EQUIP	0	6.0	8	2	5.1000000E-001	-2.2369447E-001	-1.4803500E-001	
2411 POLE LINES	1982	25.0	-86	-138	1.2100000E+000	-1.1617159E-007	-2.4692053E-003	
2421 AERIAL CABLE MET	1982	15.0	-21	-27	1.0100000E+000	-3.4025369E+000	+3.3992431E-002	
2421 AERIAL CABLE NON MET	1982	20.0	-27	-27	1.0100000E+000	-3.4025369E+000	+3.3992431E-002	
2422 UNDGRD CABLE MET	1982	15.0	-6	-6	1.0700000E+000	-7.5445040E-003	-9.0943550E-004	
2422 UNDGRD CABLE NON MET	1982	20.0	-6	-6	1.0700000E+000	-7.5445040E-003	-9.0943550E-004	
2423 BURIED CABLE MET	1982	20.0	-7	-7	1.0500000E+000	-3.8926474E-002	+2.0041675E-003	
2423 BURIED CABLE NON MET	1982	20.0	-7	-7	1.0500000E+000	-3.8926474E-002	+2.0041675E-003	
2424 SUB CABLE MET	1982	20.0	0	0	1.0519094E+000	-5.2187960E-002	-4.2294038E-003	
2424 SUB CABLE NON MET	1982	20.0	0	0	1.0519094E+000	-5.2187960E-002	-4.2294038E-003	
2426 INTRA BLDG CA MET	1982	20.0	-4	-7	1.1300000E+000	-3.6613400E-003	-6.9112203E-003	
2426 INTRA BLDG CABLE NON MET	1982	20.0	-5	-7	1.1300000E+000	-3.6613400E-003	-6.9112203E-003	
2431 AERIAL WIRE	0	9.0	-25	-30	9.6975669E-001	-3.2648516E+000	-1.2382832E-001	
2441 CONDUIT SYSTEMS	1982	60.0	-19	-19	BELL CURVE GM	5.0		

ANALOG SW ADJUSTED FOR SSA & XBA

WITNESS QUALIFICATION STATEMENT

NAME:	Nancy Heller Hughes
EMPLOYED BY:	R. W. Beck, Inc.
ADDRESS:	1001 Fourth Avenue, Suite 2500 Seattle, WA 98154-1004
EDUCATION:	University of Chicago, B.A. in Business and Statistics University of Chicago, M.B.A. in Finance and Accounting
PROFESSIONAL ACTIVITIES:	Accredited Senior Appraiser (ASA), Public Utility Discipline, American Society of Appraisers

WORK EXPERIENCE:

Ms. Hughes has worked in the telecommunications and energy industries since 1977 specializing in rates and regulation, depreciation, and valuation. She has testified as an expert witness on these issues before federal and state regulatory commissions, city councils, and courts of law. In the area of rates and regulation, Ms. Hughes is responsible for conducting and analyzing revenue requirement, cost-of-service, and rate design studies for electric, gas, telephone, and solid waste utilities. She has also participated in utility merger and acquisition cases before federal and state regulatory agencies.

Ms. Hughes has performed valuation and appraisal studies to determine the value of utility property including electric, telephone, railroad, and solid waste landfill property. These studies have been performed in connection with the sale and acquisition of property, eminent domain cases, property tax issues, and utility rate cases. In conjunction with her appraisal work, Ms. Hughes has testified as an expert witness on the valuation of utility property in condemnation proceedings and utility rate cases.

GEORGE REDDING

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF GEORGE REDDING
STATE OF COLORADO	)	
COUNTY OF DENVER	)	
	) :)	SS

George Redding, of lawful age being first duly sworn, deposes and states:

1. My name is George Redding. I am Director – Regulatory Accounting of U S WEST Communications in Denver, Colorado.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

G Redding

George Redding

SUBSCRIBED AND SWORN to before me this 5Th day of January, 1999.

William [illegible]

Notary Public

My Commission Expires:

10/28/1999

NOTARY PUBLIC STATE OF COLORADO

between the Company's customers and its investors is to flow through the pension credits to the customers and to allow the accumulated pension asset resulting from the pension credits to earn a return as part of the rate base. This reimburses the investors. This is my second pension related adjustment. It is shown at Exhibit GAR-8D.

D. ACCOUNTING ADJUSTMENTS

Q. EARLIER YOU MENTIONED THAT THERE WERE SOME ACCOUNTING ADJUSTMENTS THAT YOU WANTED TO EXPLAIN IN DETAIL.

A. Yes, they both relate to income taxes. Income taxes are the one portion of the end of period adjustment that are not brought to an end of period level directly. Income taxes on the difference between the actual net operating revenues recorded for the test year and the end of period net operating revenues are calculated. For this reason, the accounting adjustments that relate to income taxes are directly included in the calculation of the revenue requirement.

During the test year there were two such adjustments. One was the annual true-up of the prior year's income taxes in November of 1997. The other was the tax effect of the split costs that was inadvertently included in operating income taxes in June of 1998.

E. ADJUSTMENTS FOR ONE-TIME ITEMS

Q. ARE THERE ANY OTHER ADJUSTMENTS YOU WISH TO DISCUSS?

A. Yes, there are. There are three adjustments that I have made that involve a three year amortization of the costs to allow them to fit into the ratemaking model. Since these adjustments involve one-time issues, the most appropriate way to reflect them is a three year revenue requirement that will automatically cease after an amortization period. This three year revenue requirement is added to the basic revenue requirement to produce the total revenue requirement (see Exhibit GAR-1). All of these one-time adjustments are summarized at Exhibit GAR-9

Q. PLEASE DESCRIBE THESE ADJUSTMENTS.

A. The first one has already been discussed, namely the reserve deficiency amortization portion of the depreciation adjustment. The next one is the gain on the sale of Bellcore. This sale was completed in November of 1997 and resulted in a gain of $3.9M to the Arizona intrastate jurisdiction. At the time of approval of the sale, the disposition of the gain was left to the next rate case. The treatment I am proposing here is to return one half of the gain to the customers, which is consistent with past rulings of the Commission related to the sale of assets.

The last adjustment relates to the Company's costs to bring all of its systems into compliance for the year 2000 ("Y2K"). The Y2K costs will be primarily incurred over two years – 1998 and 1999. These costs are significant one time costs required to continue to provide service in the year 2000. I have removed the actual costs of this project from my test year results, and hence the end of period adjustment, and am requesting the recovery of these costs in equal portions over the next three years.

There is another potential one-time adjustment related to customer education for the new area code. In a decision issued just before the end of 1998, the Commission stated that U S WEST would have to pay its share of such customer education costs. If these costs become known during the pendency of this docket, these costs should also be included in the calculation of the three year revenue requirement.

F. COMMISSION ADJUSTMENTS NOT MADE

Q. EARLIER IN YOUR TESTIMONY YOU MENTIONED THAT THERE WERE SOME COMMISSION ADJUSTMENTS FROM THE LAST CASE THAT YOU HAVE NOT MADE IN THIS FILING. WOULD YOU ELABORATE ON THESE?

A. There were four adjustments accepted by the Commission in the last case with which I disagree. The first of these is Post Retirement Benefits Other Than Pensions ("PBOPs"). The others are Directory, the disallowance of certain Affiliated Interest costs and the disallowance of Image Advertising.

1. POST RETIREMENT BENEFITS OTHER THAN PENSIONS

Q. PLEASE ADDRESS THESE ADJUSTMENTS.

A. The first deals with Post-Retirement Benefits Other than Pensions. The Company was required to switch from "pay as you go" accounting for PBOPs to accrual accounting by Statement of Financial Accounting Standards No. 106 ("FAS 106"). U S WEST requested adoption of the new accounting standard in its last rate case, but was denied.

Q. WHAT HAS CHANGED SINCE THE LAST CASE?

A. The Commission has accepted accrual accounting for PBOPs for other utilities in Arizona. Specifically, the Commission laid out standards for acceptance for Paradise Valley Water Company in Decision 60220, dated May 27, 1997. In Decision No. 60352, dated August 29, 1997, the Commission approved a settlement in Docket No. U-1551-96-596 for Southwest Gas Corporation. The order stated that the settlement for PBOPs was in accordance with The Residential Utility Consumer Office ("RUCO") position on this matter. RUCO was in favor of the accrual treatment for PBOPs provided certain conditions were met. These conditions were the same as the conditions outlined in the Paradise Valley decision.

Q. PLEASE OUTLINE THESE CONDITIONS.

A. They are as follows:[1]

1. The PBOP expense allowance must meet the conditions of being both reasonable and prudent as determined by the Commission;

[1] Decision No. 60220, Paradise Valley Water Company & Direct Testimony of Marylee Diaz Cortez for RUCO in Docket No. U-1551-96-596, Southwest Gas Corporation.

2. The Company must compute PBOP expense in accordance with Statement of Financial Accounting Standards No. 106, Employers' Accounting for Postretirement Benefits Other Than Pensions (SFAS 106);
3. The Company must use reasonable, unbiased, and supportable actuarial assumptions as a basis for its calculation of PBOP expense;
4. The Company must fund PBOP expense no less frequently than quarterly, and the amount of each payment must represent a ratable portion of the annual PBOP expense;
5. Funding deposits must be made in cash to an irrevocable, independently managed external Trust;
6. To the extent allowed by law, the Company must maintain a tax deductible status for PBOP expense and a tax exempt status for the earnings of the Trust;
7. Investments made by the Trustee of the Trust must be compatible with meeting PBOP obligations as they come due;
8. Any accumulated excess of accrual-based over cash-based revenues intended to cover PBOP expenses is subject to refund, to the extent PBOP assets cannot be used for PBOP expenses or have been used for unauthorized, non-PBOP purposes;
9. Disbursements from the trust fund should be limited to payments for the benefits of retirees in accordance with the Company's benefit plans, administrative costs of the Trust and other purposes authorized by the Commission; and
10. Upon termination of the Trust and satisfaction of all PBOP obligations any residual funds are to be utilized only as approved by the Commission.

Q. DO THE PBOPs U S WEST IS PROPOSING IN THIS CASE MEET THESE CONDITIONS?

A. With one minor exception to number 4, yes.

Q. WHAT IS THE EXCEPTION?

A. It relates to the funding. Since the adoption of PBOPs, U S WEST has provided funding to a trust that meets the standards as enumerated by the Commission. Part of this funding has been provided by shareowners as the funding has been in excess of the authorizations from the various jurisdictions in which U S WEST operates. It was economically advantageous to both the Company and its customers to make this funding following the adoption of SFAS106 due to the tax deductible nature of the funding. What the Company proposes here is to assign this shareowner funding to Arizona before it makes incremental, new cash funding to the trust. Based on the assumption that rates from this proceeding will not go into effect until the year 2000, U S WEST would have to begin providing new funding in the latter part of 2001.

2. DIRECTORY

Q. WHAT ADJUSTMENT HAVE YOU MADE FOR INCLUDING THE FEES AND VALUE OF SERVICES PROVIDED BY U S WEST DEX TO THE COMPANY?

A. I have made no adjustment in the development of the revenue requirement. In the Company's opinion, the appropriate fees and value of services provided by DEX are already reflected on its books. Ms. Koehler-Christensen addresses the rationale for this in detail in her testimony.

3. AFFILIATED INTERESTS

Q. PLEASE ADDRESS THE OTHER COMMISSION ADJUSTMENTS FROM THE LAST CASE THAT YOU DISAGREE WITH.

A. They relate to the disallowances of various affiliated interest expenses and image advertising. They will be addressed together since image advertising was an affiliated interest expense at the time of the last case. There have been many changes in the affiliate structure since the last case. Because of this I would like to briefly outline these changes. Then I want to specifically address the disallowances from the last case and point out why I believe they are improper.

a. HISTORY OF AFFILIATE CHANGES

Q. WHAT CHANGES HAVE TAKEN PLACE IN THE AFFILIATE RELATIONSHIPS SINCE THE LAST RATE CASE?

A. A number of changes have taken place since the last rate case. These changes have been described in the annual reports filed with the Commission each spring, but I will give a brief overview for each of the affiliates affected. The following four former affiliates no longer have an affiliated relationship with U S WEST; Bellcore, NewVector, U S WEST Enhanced Services and U S WEST Real Estate. National Telecommunications Alliance ("NTA"), !nterpriseAmerica, U S WEST Information Technologies, Inc. ("IT"), U S WEST Long Distance and U S WEST Wireless are all new affiliates which have been formed since the last case. Finally, U S WEST, Inc., U S WEST Advanced Technologies, and U S WEST DEX have undergone changes since the 1993 test period.

Q. WHAT IS THE STATUS OF U S WEST'S AFFILIATE RELATIONSHIP WITH BELLCORE?

A. U S WEST was a consortium owner of Bellcore which was sold to Science Applications International Corporation ("SAIC"). The sale was finalized on November 17, 1997. Therefore, most 1997 payments are tracked as affiliated interest expense. Going forward in 1998 payments are made to SAIC as a third party supplier of products and services who competes for U S WEST's business like any other vendor. Because of the end of period adjustment, the test year expense reflects the current expenditure levels to a third party supplier.

Q. ASIDE FROM BELLCORE, WHAT OTHER COMPANIES ARE NO LONGER AFFILIATES?

A. NewVector is no longer an affiliate as result of a phased approach beginning in 1994 to create a joint venture and subsequently merge with AirTouch Communications. NewVector became part of the Media Group with targeted stock and AirTouch and Media Group entered the first phase of their joint venture on November 1, 1995. The phased approach was completed when New Vector was divested from U S WEST and combined its domestic operations with Airtouch into a joint venture on April 6, 1998.

U S WEST Enhanced Services, Inc. has phased out its operations and sold its assets to a non-affiliated third party.

U S WEST Real Estate, Inc. ("USREI") still exists as a corporation, however, USWREI no longer owns any buildings being leased to U S WEST, so there are no longer affiliated transactions between U S WEST and USWREI.

Q. WHAT AFFILIATES HAVE BEEN FORMED SINCE THE LAST CASE AND WHAT SERVICES DO THEY PROVIDE TO USW?

A. National Telecommunications Alliance (NTA), is a corporation jointly held in equal shares by U S WEST Communications, Ameritech Network Services, Inc., Bell Atlantic Network Services, Inc., BellSouth Telecommunications, Inc., Telesector Resources Group, Inc., Pacific Bell and Southwestern Bell Telephone Company. NTA was created in 1997 and assumed responsibility from Bellcore for providing a single point-of-contact for National Security and Emergency Preparedness and supporting reliability, security and interoperability of telecommunications networks.

!nterprise America was established in March 1995 as a subsidiary of U S WEST Communications Services, Inc. ("CSI"), which is a subsidiary of U S WEST. !nterprise America serves as a holding company for the various out-of-region joint ventures with alternative access/cable television companies to market data networking services. !nterprise America also provides U S WEST with management of data transport services for U S WEST's customers. These services include sales related activities, systems development and maintenance and technical operations.

U S WEST Information Technologies, Inc. ("IT) was formed in 1997. It provides the Company with technology systems development enhancement and support. This information systems services and support is primarily focused on integrated software and systems design, development, enhancement and operation of client business applications.

The Telecommunications Act of 1996, permits U S WEST to provide interLATA services in-region when certain requirements are met. U S WEST Long Distance (LD) was established for this purpose. Currently, LD provides management and procurement of interLATA toll services for U S WEST's official company services needs, as well as for other U S WEST

Companies. LD also acts as an agent of U S WEST for the payment of interLATA toll charges to outside third parties.

Finally, U S WEST Wireless ("USWW") was incorporated May 15, 1997. It is a fully owned subsidiary of U S WEST, set up as a Limited Liability Corporation. It became operational January 1, 1998. USWW was created to transfer U S WEST assets and personnel associated with providing Personal Communications Services (PCS) into a separate affiliate in accordance with FCC Order WT Docket No. 96-162.

Q. PLEASE DESCRIBE BRIEFLY THE REORGANIZATION THAT TOOK PLACE IN JUNE 1998 WITH REGARD TO U S WEST, INC.

A. In 1995 U S WEST, Inc. created two distinct parts of the business with the establishment of "targeted" stock. One stock was called U S WEST Media Group and the other U S WEST Communications Group. In June 1998, these two groups became separate corporations. The former U S WEST Communications Group, Inc. became the new U S WEST, Inc. and U S WEST Media Group became MediaOne, Inc. a wholly separate and unaffiliated company. For the most part, subsidiaries that had been in Communications Group remained with the new U S WEST, Inc., and subsidiaries that had been in Media Group remained with the corporation that is now MediaOne. DEX moved from the Media Group to the Communications Group as part of the restructure and is now a subsidiary of the new U S WEST, Inc.

Q. ARE THE COSTS OF THIS REORGANIZATION INCLUDED IN THE TEST PERIOD?

A. No, all costs associated with the reorganization have been booked below the line.

b. DISCUSSION OF DISALLOWANCES

Q. WERE CERTAIN CHARGES FROM U S WEST, INC. TO U S WEST COMMUNICATIONS (NOW U S WEST) DISALLOWED IN THE LAST CASE?

A. Yes. I will address each of them separately.

Q. WHAT WAS THE BASIS FOR THE DISALLOWANCE OF THE CASH MANAGEMENT EXPENSE IN THE LAST CASE?

A. The Commission disallowed the cash management expense on the basis that the benefit of the cash management group was higher interest income. Since the interest income is booked below the line, the assumption was that the cash management expense should not be included in the revenue requirement.

This overlooks the primary function of the cash management group, which is to assure the availability of the appropriate levels of cash to operate the ongoing business. Without this function, the necessary cash would not be on hand to meet the demands of the business at the lowest cost to the Company, and, ultimately, the customer.

Q. ARE ALL U S WEST, INC. EXECUTIVE SALARIES FOR THE TEST YEAR INCLUDED IN THIS FILING?

A. No. Prior to the restructure, there were U S WEST, Inc. officers and U S WEST Communications officers. Effective with the restructure in mid-June, there is only one set of officers. By annualizing the June executive salary amount, rather than using the entire test period amount, only the salaries of the new U S WEST, Inc. officers are included.

Q. WHY IS IT APPROPRIATE TO INCLUDE LEGISLATIVE EXPENSE?

A. U S WEST's operating environment is in a state of continual change. This state of change is due, in good part to legislative activity. It is normal for a business to incur expenses associated with participating in the legislative process. It is necessary for the continued well being of the corporation and its customers.

Q. IN THE LAST CASE, THIS COMMISSION DISALLOWED PART OF THE PUBLIC RELATIONS EXPENSE CHARGED BY U S WEST, INC. BECAUSE IT VIEWED THE PROMOTION OF FAVORABLE PUBLIC IMAGE AS BENEFITING THE SHAREOWNERS, RATHER THAN THE RATEPAYERS. DO YOU AGREE WITH THIS POSITION?

A. No, I do not. In the changing and increasingly competitive market in which U S WEST now operates, it is necessary to maintain a positive public image. This benefits the customers as well as the shareowners and should be included as a regular business expense.

Q. ARE THE IMAGE ADVERTISING EXPENSES INCLUDED IN THE U S WEST, INC. CHARGES TO U S WEST COMMUNICATIONS?

A. No. In 1996 U S WEST, Inc. stopped placing image advertising on behalf of the family of companies. Since that time each entity has been responsible for placing and paying for its own product and image advertising.

Q. WHAT HAS CHANGED SINCE THE LAST CASE?

A. The competitive landscape. U S WEST currently has competition in its business market and it is rolling out in the residential market. In a competitive environment a company's "brand" is an important segment of its competitive success. Because of these changed conditions I am not removing image advertising from the calculation of the revenue requirement.

Q. DO THE COMPANY'S CUSTOMERS RECEIVE A BENEFIT FROM IMAGE OR BRAND ADVERTISING?

A. They certainly do. To the extent U S WEST is successful in promoting its brand and loyalty to that brand, it means lower losses to competition. To the extent the Company can retain customers, the less likely it is to suffer revenue shortfalls and have to come to this Commission for additional revenues. Image advertising is done by all of the Company's competitors and is a normal part of advertising in a competitive environment. These costs should be allowed in the current environment.

Q. PLEASE EXPLAIN THE CHANGES THAT HAVE TAKEN PLACE AT U S WEST ADVANCED TECHNOLOGIES, INC. ("USWAT" or "AT") SINCE THE LAST RATE CASE.

A. AT has become an increasingly integral support resource to U S WEST. In the past AT supported the Company, however today this support is even more integrated with U S WEST's goals and objectives than it was previously. The resources of U S WEST Advanced Technologies are focused on: 1) strategic support of corporate initiatives, and 2) client specific support for business unit initiatives. With this focus, AT is driven by the needs and funding provided by the Company's business units which results in a closely integrated partnership.

Q. PLEASE DESCRIBE U S WEST ADVANCED TECHNOLOGIES, INC. AND THE SERVICES IT PROVIDES.

A. AT provides technology services that include 1) research, development, design, and engineering of telecommunications networks, products and services; 2) design and development of new products and services that are compatible with or enhance the products and services provided by the Company; 3) information management services related to U S WEST's internal data networks; 4) technology management services; 5) oversight and consulting services regarding Bellcore; and 6) development of intellectual properties. All of these services are provided for the purpose of supporting the cost-effective and efficient operation of the Company.

Q. WHAT HAPPENED TO THE PROJECTS THAT WERE SUPPORTING THE MEDIA GROUP SIDE OF BUSINESS?

A. Prior to the June restructure, USWAT was effectively divided. Employees who were supporting the media side of the business became part of MediaOne. Therefore, there are no longer employees or projects at USWAT that support that side of the business.

Q. WHAT ISSUES WERE RAISED WITH REGARD TO AT EXPENSES IN THE LAST RATE ORDER?

A. The issues raised in the last case centered primarily around the following assumptions: 1) The allocation process regarding AT's Corporate Research & Development projects placed an unfair amount of burden on the Company's regulated customers; and 2) Projects in the Emerging Technologies; Globalization; Information and Multimedia Services; Network Delivery Capabilities; and Wireless programs provided no current benefits to U S WEST and its regulated customers.

Q. DID THE COMMISSION DISALLOW ALL OF AT'S EXPENSES IN THIS CASE?

A. No. The Commission concurred with U S WEST that there was no evidence of imprudent expenditures for corporate research and development but focused on a concern over which entities bear the burden of the R&D costs. The Commission disallowed $2,369,000 from the programs mentioned above based on the assumption that the Company had failed to demonstrate the amount was appropriate. U S WEST was directed to develop an allocation process to improve the match between costs and expected benefits for corporate R&D.

Q. DO YOU AGREE WITH THE CONCLUSIONS REACHED IN THE LAST CASE REGARDING THESE USWAT EXPENDITURES?

A. No. I believe the process used to the allocate the corporate R&D projects included in the last rate case were reasonable and prudent, with the costs accurately aligned with the benefits. The majority of the disallowance impacted the work provided throughout the Network Delivery Capabilities program which provided significant benefit to U S WEST and its customers.

Much of the work contained in the program centered around operations research and modeling used to manage the business. Among the projects that were disallowed from the Network Delivery Capabilities program was the work AT provided in Integrated Plan for Network Architecture project. This work integrated Bellcore's generic architecture work with the Company's unique service mix and network evolution to create network architecture plans. Plans such as this enable the Company to make good decisions in allocating its resources to ensure customers get the services they want while avoiding unnecessary expenses. Since technology is not static, such architecture planning is necessary to ensure U S WEST's network stays abreast of the changing technology.

Another project that was disallowed was the Network Optimization Tools Project. This project developed several mathematical and computer aided modeling tools which optimize designs for building high reliability networks at the lowest cost. SONET (Synchronous Optical Network) Ring Planning Tool was developed under this project in 1993. SONET was used in the last test period by U S WEST's Network Planners to design USW's interoffice fiber network, which allows the Company to communicate with its facilities throughout the region. Much of the work that was disallowed in the last order actually included projects required to improve and plan for the most basic elements of its network. This type of fundamental network planning clearly benefits the Company and its customers.

Q. HAS THE ALLOCATION PROCESS FOR CORPORATE R&D CHANGED SINCE THE LAST CASE?

A. Yes. The relationship between the Company and AT has changed in the years since the last case and the processes used to fund and manage the work program have also evolved to support the changing relationship. The goal in allocating expense among entities has always been to match expense to the entities expecting to benefit from the work. This process has become even more customized and fine-tuned in recent years particularly as AT has sought to partner even more closely with its clients. Interestingly, no current expenses for AT's work are booked to Account 6727, Corporate Research and Development. Typically, the AT work program supports specific initiatives requested by U S WEST and the other affiliated companies.

Q. HOW IS AT'S WORK FUNDED?

A. Work provided by AT is funded in two ways - either directly or designated as strategic. The vast majority of AT's projects, approximately 71% in the test period, are Directly Funded, where the budget and approval of the projects are specified and driven by client needs. Direct funded projects are requested by a particular client and generally produce a specific and immediate work product. Direct Funded project costs are not allocated; they are paid by the client that requests and receives the work. If the client is an unregulated subsidiary, the costs are booked to that entity and the Company's customers are not impacted.

Strategic work provides broader benefits to multiple entities within the U S WEST family. Only Strategic project costs are allocated and they are allocated to the entities that are expected to benefit from the results.

Q. PLEASE DESCRIBE THE FUNDING PROCESS.

A. The annual funding process begins when the Company's Finance Department provides a "top-down" budget for each business unit. This budget also includes an amount to be used in support of strategic and corporate initiatives.

Concurrently, a "bottom-up" view of the work program for the year is proposed jointly by AT and their clients or sponsors, which includes the foundational work typified by Strategic work as well as the very client specific needs represented by Directly Funded work of the individual units

The third step applies to Directly Funded work and involves AT's Business Council. The Business Council is chaired by AT's Director of Operations and includes AT's Vice President - Chief Technology Officer, John Czak and AT's Senior Directors. The Senior Directors are responsible individually and as a team for satisfying clients' needs. For a project to be approved by the Business Council, it must 1) be technically feasible, 2) have an appropriate sponsor outside of AT, and 3) have clearly defined outputs. The Business Council reconciles the top down and bottom up views by prioritizing the projects. This prioritization maximizes the benefit of the work to AT's clients within the budget boundaries.

With Strategic work, the allocation methodology is applied to the funding entities by the Senior Directors at AT based on their technical expertise and input from their clients. U S WEST's Chief Technology Officer, in his responsibility to manage the technology resources on behalf of the entire organization subsequently approves the allocation.

Q. WHAT CONTROL DOES U S WEST HAVE OVER AT'S ACTIVITIES?

A. The Company has control over AT's work at several levels of the organization. Currently, AT's Vice President - Chief Technology Officer (CTO) , is a U S WEST employee who is also responsible for oversight of the Company's Network Planning organization. In this dual capacity, the CTO is responsible for all new services and technology planning, project implementation, technology selection and development of standard network design, legal and regulatory planning, network systems planning and outside plant records conversion. These responsibilities ensure that AT's work serves the needs of the Company and its customers.

Additionally, U S WEST's Finance Department controls AT's budget through its control of the Business Unit's "top-down" budgets. These budgets are developed by Finance in conjunction with the Business Unit leaders. Subsequently, these clients determine the content of AT's work program. This is done by U S WEST project leaders who establish contracts (i.e. Technical Service Orders) for specific AT projects and by the AT Board which approves the work program for projects with broader applications.

Q. DOES THIS REPORTING STRUCTURE DIFFER FROM AT'S REPORTING STRUCTURE IN THE LAST CASE?

A. Yes. As I mentioned previously, all processes continue to evolve and improve over time. This is also true of the structure and mission at AT which has evolved in response to the changing needs of the corporation, primarily those of the Company. During the last case, AT functioned far more autonomously than it does today. That arrangement served U S WEST's needs at the time but has transformed into a far more integrative and collaborative partnering approach today.

Q. PLEASE PROVIDE AN EXAMPLE OF HOW AT'S WORK BENEFITS ARIZONA CUSTOMERS.

A. Since the last case, numerous services have been introduced in Arizona. Some examples of where AT's work contributed to the creation of services and/or deployments are listed below:

- During the first quarter of 1998, a fiber optic network linking the three digital office switches in Yuma to the Company's Phoenix-based digital switch was deployed. This new infrastructure between Yuma and Phoenix provides additional voice circuits as well as high-speed data lines to benefit customers in southwest Arizona.

- In addition to providing value in the business computing, data networking, and distance learning arenas, AT's work with ATM and DSL benefits basic telephone customers because it reduces network complexity, increases network performance and capacity and improves network reliability and security. One way this helps voice customers is that the technology allows for the Public Switched Telephone Network (PSTN) to be off-loaded onto an ATM backbone. With the burgeoning growth of the Internet, this has become increasingly important to ensure that the PSTN doesn't incur failures from the heavy usage placed upon it by Internet users. Currently, the far flung facilities comprising Maricopa County's law enforcement, transportation and administrative functions are networked through ATM switches in Phoenix and Mesa. One benefit derived from this arrangement is that the fingerprinting process to match suspects to a central database has been reduced to seconds.

Q. ARE THERE ANY OTHER AFFILIATED INTEREST ISSUES YOU WISH TO DISCUSS?

A. Yes. In the last case there were disallowances related to rent expense for leased buildings. Although this is not an affiliated interest issue in this case, it was brought up in the context of affiliated interests in the last case.

Q. REGARDING THE REAL ESTATE LEASES THAT WERE AT ISSUE IN THE LAST CASE, WHICH BUILDINGS WERE INCLUDED IN THE DISALLOWANCE?

A. The following eleven locations were partially disallowed in the previous rate case:

- 1801 California, Denver, Colorado
- Orchard Falls, Englewood, Colorado
- 188 Inverness, Englewood, Colorado
- Advanced Technologies Research Center, Boulder, Colorado
- Landmark Tower, Omaha, Nebraska
- Landmark Data Processing Center, Omaha, Nebraska
- PhoenixWest I, Phoenix, Arizona
- PhoenixWest II, Phoenix, Arizona
- 5090 N 40th, Phoenix, Arizona
- 20 E. Thomas, Phoenix, Arizona
- TusconWest, Tucson, Arizona

Q. DOES U S WEST OR AN AFFILIATE STILL OCCUPY ALL OF THESE BUILDINGS?

A. No, as a result of the company split in 1998, the 188 Inverness building has been vacated by U S WEST. In addition, since the last rate case, the Company's square footage in many of the buildings has been reduced due to changing business needs. For example, at the time of the last rate case, the Company was leasing 74,424 square feet in the PhoenixWest II building. As of today, U S WEST is only leasing 3,132 square feet. At TucsonWest, U S WEST has gone from 132,243 square feet to a current 42,101 square feet. In total for the 11 properties at issue in the last case, the total square footage being leased has declined from 3,182,100 square feet in 1994 to 2,560,552 square feet today. Therefore, an assertion made in the last case that the Company was "locked in" to long term commitments at these locations simply is not true. Space that U S WEST no longer needs in the buildings is turned over to U S WEST Business Resources who then markets the space to third party tenants, with no financial impact to the Company.

Q. IN THE LAST CASE, U S WEST WAS ORDERED TO PROVIDE EVIDENCE THAT THE LEASE RATES IN THE BUILDINGS LISTED ABOVE ARE REASONABLE. WHAT EVIDENCE DO YOU HAVE?

A. I have market information from Cushman & Wakefield that shows the estimated cost of new market leases entered into in 1998 that would be comparable to the U S WEST properties. For eight of the ten remaining properties, the lease rates today are higher than the rates the Company is paying in those locations. This is the result of rapidly rising market lease rates in some locations such as Phoenix which has had a 49% increase in rates since 1994, and Denver which has seen a 38% increase. For the two other properties, TucsonWest is less than 1% above the estimated market rate, and 5090 N. 40th is 5% above the estimated market rate.

For example, at 1801 California, U S WEST is currently paying a lease cost of $24.59 (including operating expenses). According to the market data, the cost of similar space for a new 10 year lease beginning in 1998 would be $28.09 per square foot. Therefore, the $24.59 that the Company is booking is reasonable and is 12% below the current market rate.

Q. WHAT WOULD YOU CONCLUDE FROM THIS MARKET DATA?

A. I would conclude that overall, U S WEST's decisions regarding the leases for these properties have, in hindsight, proven to be good business decisions and of benefit to today's ratepayers. Entering into leases always involves a degree of risk as to what the future market rates will be and how the rates you negotiate will compare to the actual market rates over the life of the lease. As discussed above, in eight of the ten properties, the Company is already benefiting from a lower than market rate, and the rate we are paying still has many years to go. Therefore, most likely, the benefits from our rates will increase even more over time assuming market rates continue to grow. For the two properties where our rates are slightly above the market, we still have approximately nine years left on those leases. The Company expects that the market will rise, soon surpassing our rates and ratepayers will benefit for many years in the future. Therefore, there is no basis for a disallowance on any of these properties.

Q. THE LAST ORDER ALSO REQUIRED U S WEST TO JUSTIFY WHY IT DID NOT RENEGOTIATE ITS LEASES PRIOR TO THE SALE/LEASEBACK TRANSACTIONS. WERE THE LEASES RENEGOTIATED?

A. Yes, they were. U S WEST renegotiated all of the leases that are at issue except for 20 E Thomas where we have a very favorable rate (the Company's lease rate is approximately 35% below the current market rate). For example, at PhoenixWest I, PhoenixWest II, 5090 N 40th and TucsonWest, the renewal terms in the leases were all renegotiated and replaced with new terms that were more favorable. Other examples are 1801 California where the Company replaced the existing renewal terms with new terms, Landmark Data Center where the rate was lowered, and the Advanced Technologies Research Center where we renegotiated for a shorter lease term and more flexibility regarding the use of the facility.

Q. WHAT IS YOUR CONCLUSION REGARDING RENTS?

A. The amounts being paid are reasonable and no adjustment should be made to the level of rent expense recorded on the Company's books.

Q. WOULD YOU PLEASE SUMMARIZE THIS PORTION OF YOUR TESTIMONY?

A. Certainly. Affiliated interests have changed dramatically since the last case. The services provided to U S WEST today are directly related to its provision of modern telecommunications services. Competition has changed the landscape, driving the Company and its affiliates toward leaner and more directed services. There should be no question that the services provided to U S WEST are in the best interests of the Company and its customers.

VII. OTHER ITEMS

Q. WHAT OTHER ITEMS DO YOU WISH TO ADDRESS?

A. In Docket No. E-1051-93-183, the Commission ordered U S WEST to prepare a productivity study as part of its next rate case. U S WEST has prepared this study to comply with the Commission's order.

Q. DID RUCO RECOMMEND A PRODUCTIVITY ADJUSTMENT IN THE PRIOR CASE?

A. Yes, RUCO recommended reducing the revenue requirement by one-half of the productivity benefits. RUCO's reasoning for this adjustment was that the test year data incorporated only one-half of the gain in productivity.

Q. WOULD IT BE APPROPRIATE TO MAKE A SIMILAR PRODUCTIVITY ADJUSTMENT IN THIS REVENUE REQUIREMENT?

A. No, it would not. All productivity benefits are already incorporated into the test year revenue requirement. The revenues, expenses and rate base used in the determination of the revenue requirement reflect all the benefits of productivity increases. In addition, these have all been annualized to the end of the test year, which assures that the gain has been captured. Further adjustment is neither necessary nor appropriate.

Q. ARE THERE OTHER REASONS A PRODUCTIVITY OFFSET SHOULD NOT BE MADE?

A. There is another very important reason. A fully adjusted test year, even with the end of period adjustment, cannot be fully representative of the future. Productivity is one of the means the Company has of maintaining its earnings levels between rate cases. However, as shown in the financial results section of my testimony (Section I), Arizona operations have not shown any dramatic gains since the rates from the last rate case went into effect despite the gain in productivity shown by the study. Similarly, the Company should be allowed to benefit from productivity going forward to increase the rate case interval and help offset other increases in the Company's cost of doing business.

Q. PLEASE EXPLAIN THE METHODOLOGY USED IN THE PRODUCTIVITY STUDY PREPARED FOR THIS FILING.

A. Productivity is measured as the relationship between the level of inputs and outputs in a firm. Therefore, this study calculated the year by year changes in inputs and outputs for U S WEST's Arizona intrastate operations over the last ten years, 1988 – 1998, using data from standard company reports. Overall productivity was then calculated as the difference between the change in outputs and the change in inputs. A ten-year study period is appropriate due to the volatile nature of the productivity results as can be seen in the study results shown as Exhibit GAR-12.

Q. WHAT WERE THE STUDY RESULTS?

A. The average productivity over the ten year period was 0.8%.

Q. WHAT DATA WAS USED TO MEASURE INPUTS?

A. U S WEST used operating expenses as a measure of the productivity inputs. The expenses included were maintenance, engineering, network operations, network administration, access, other, customer operations and corporate operations. U S WEST did not include expenses for depreciation and property taxes because those expenses are mandated by outside parties and therefore not under the Company's direct control.

To measure the capital input, gross investment was used since depreciation expense is not included. The authorized rate of return was applied to the gross investment to calculate the expense associated with the capital.

All of the expenses were then deflated to a 1988 level in order to eliminate any impacts of inflation.

Q. HOW WERE OUTPUTS MEASURED?

A. Outputs were measured as total revenues. Rate changes were removed, so that the increase in revenues would be attributable to increases in volumes.

VIII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY

A. Arizona's financial performance over the past five years dictates a need for an increase in rates. The Company has not been able to earn anywhere near its last authorized rate of return under present rates. U S WEST's cash flow in Arizona has been inadequate to cover its huge new investments in the state. The Company faces the need for continued massive investment in the state, but such investments are not justifiable unless the Company has adequate cash flow for these new investments. This need for adequate rates and cash flow is heightened by competition. Competition is present in Arizona and growing. Under the old model, U S WEST could invest and be guaranteed to eventually recover the cost of its investments. This is no longer true with competition. Now, the Company must have reasonable earnings on a current basis to justify new investment.

I have calculated a total revenue requirement of $225.9M. The calculation is reasonable and follows the same basic methodology used by this Commission in prior cases. The only significant changes I have made are in the area of disallowances. Many of them, even if they once had any validity, are no longer appropriate in light of organizational changes, focus of costs, competition or changes in the market. I believe that the revenue requirement I have calculated is reasonable and would provide U S WEST in Arizona the opportunity to earn an adequate return. This, in turn, will allow the Company to make the investments necessary to compete fairly and provide the telecommunications services demanded by Arizona customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

EXHIBITS OF

GEORGE REDDING

U S WEST COMMUNICATIONS

JANUARY 8, 1999

EXHIBITS OF
GEORGE REDDING

INDEX

U S WEST
Arizona Intrastate Operations
Revenue Requirement Summary
Test Year Ending June 30, 1998
$(000)

			Original Cost		Fair Value
1.	Adjusted Rate Base		1,474,717		1,737,397
2.	Adjusted Net Operating Income		73,596		73,596
3.	Current Rate of Return (L2/L1)		4.99%		4.24%
4.	Required Operating Income (L1*L5)		158,404		186,619
5.	Required Rate of Return		10.74%		10.74%
6.	Operating Income Deficiency		84,808		113,023
7.	Gross Revenue Conversion Factor		1.6808		1.6808
8.	Increase in Gross Revenue Requirements (L6*L7)	$	142,542	$	189,966
9.	Three Year Revenue Requirement		83,336		83,336
10.	Total Increase in Revenue Requirement (L8+L9)	$	225,878	$	273,301

U S WEST
Arizona Intrastate Operations
Capital Structure
Test Year Ending June 30, 1998
$(000)

	Percent of Total Capital	Cost Rate	Weighted Cost
Total Debt	41.20%	7.52%	3.10%
Common Equity	58.80%	13.00%	7.64%
Total Capital	100.00%		10.74%

U S WEST
Arizona Intrastate Operations
Income to Revenue Multiplier
Test Year Ending June 30, 1998
$(000)

1	Gross Intrastate Revenue	100.00%
2	Less: Uncollectible Revenue (Note a)	1.032%
3	Total Revenue (L1-L2)	98.9680%
4	Less: Taxes on Local Revenue Service (Note b)	0.1137%
5	Taxable Income (L3-L4)	98.8543%
6	Less: Effective State Income Tax (L5 * 7.41%)	7.3225%
7	Less: Effective Federal Income Tax (L5 * 32.41%)	32.0361%
8	Net Operating Earnings (L5-L6-L7)	59.4957%
9	Income to Revenue Multiplier (L1 / L8)	1.6808

Notes:
a. Based on Test Year End of Period Adjustment.
b. Includes Franchise and License taxes and Sales tax assumed.

U S WEST
Arizona Intrastate Operations
Original Cost Rate Base Summary
Test Year Ending June 30, 1998
$(000)

Original Cost	[a] Intrastate EOP Rate Base	[b] Accounting Adjustments	[c] Commission Adjustments	[d] Proforma Adjustments	[e]=a+b+c+d Original Cost Rate Base	3 Yr. Rev. Rqmt. Adjustments
1 Telephone Plant In Service	3,446,771	0	0	959	3,447,730	1,165
2 Short-Term Plant Under Construction	0	0	0	0	0	0
3 Materials and Supplies	16,738	0	0	0	16,738	0
4 Allowance for Cash Working Capital	(20,190)	0	(15,851)	0	(36,041)	0
5 Accumulated Depr & Amort Reserve	(1,648,674)	0	0	(19,139)	(1,667,813)	(86,598)
6 Accumulated Deferred Income Tax	(327,431)	0	0	7,631	(319,800)	34,324
7 Customer Deposits	(6,341)	0	(2,184)	0	(8,525)	0
8 Land Development Agreement Deposits	(21,629)	0	0	0	(21,629)	0
9 Other Assets & Liabilities	0	0	0	64,057	64,057	0
10 **End-of-Period Rate Base(L1.L9)**	1,439,244	0	(18,035)	53,508	1,474,717	(51,109)

NOTE: Fair Value is 50% Original Cost and 50% RCND

U S WEST
Arizona Intrastate Operations
Fair Value Rate Base Summary
Test Year Ending June 30, 1998
$(000)

1	Telephone Plant In Service	3,937,682
2	Short-Term Plant Under Construction	0
3	Materials and Supplies	16,738
4	Allowance for Cash Working Capital	(36,041)
5	Accumulated Depr & Amort Reserve	(1,895,086)
6	Accumulated Deferred Income Tax	(319,800)
7	Customer Deposits	(8,525)
8	Land Development Agreement Deposits	(21,629)
9	Other Assets & Liabilities	64,057
10	**End-of-Period Rate Base(L1.L9)**	1,737,397

N0TE: Fair Value is 50% Original Cost and 50% RCND

U S WEST
Arizona Intrastate Operations
End of Period Rate Base - Summary of Rate Base Commission Adjustments
Test Year Ending June 30, 1998
$(000)

		[a]	[b]	[c]=a+b
		Customer Deposits Adjustment	**Cash Working Capital**	**Summary Commission Adjustments to Rate Base**
1	Telephone Plant In Service	0	0	0
2	Short-Term Plant Under Construction	0	0	0
3	Materials and Supplies	0	0	0
4	Allowance for Cash Working Capital	0	(15,851)	(15,851)
5	Accumulated Depr & Amort Reserve	0	0	0
6	Accumulated Deferred Income Tax	0	0	0
7	Customer Deposits	(2,184)	0	(2,184)
8	Land Development Agreement Deposits	0	0	0
9	Other Assets & Liabilities	0	0	0
10	**End-of-Period Rate Base(L1.L9)**	(2,184)	(15,851)	(18,035)

Note: For explanation of adjustments, see backup behind GAR - 5B

U S WEST
Arizona Intrastate Operations
End of Period Rate Base - Summary of Proforma Adjustments Included
Test Year Ending June 30, 1998
$(000)

		[a]	[b]	[c]	[d]
		Depreciation	Pension Asset	OPEB Adjustment	Summary Proforma Adjustment Included
1	Telephone Plant In Service	0	0	959	959
2	Short-Term Plant Under Construction	0	0	0	0
3	Materials and Supplies	0	0	0	0
4	Allowance for Cash Working Capital	0	0	0	0
5	Accumulated Depr & Amort Reserve	(19,165)	0	26	(19,139)
6	Accumulated Deferred Income Tax	7,631	0	0	7,631
7	Customer Deposits	0	0	0	0
8	Land Development Agreement Deposits	0	0	0	0
9	Other Assets & Liabilities	0	64,057	0	64,057
10	**End-of-Period Rate Base(L1.L9)**	(11,534)	64,057	985	53,508

Note: See explanations following GAR-8

U S WEST
Arizona Intrastate Operations
End of Period Rate Base - Summary of Three Year Revenue Requirement Adjustments
Test Year Ending June 30, 1998
$(000)

		Depreciation Surcharge	Year 2000 Cost Surcharge	Summary of 3 Yr. Rev. Rqmt. Adj. to Rate Base
1	Telephone Plant In Service	0	1,165	1,165
2	Short-Term Plant Under Construction	0	0	0
3	Materials and Supplies	0	0	0
4	Allowance for Cash Working Capital	0	0	0
5	Accumulated Depr & Amort Reserve	(86,210)	(388)	(86,598)
6	Accumulated Deferred Income Tax	34,324	0	34,324
7	Customer Deposits	0	0	0
8	Land Development Agreement Deposits	0	0	0
9	Other Assets & Liabilities	0	0	0
10	**End-of-Period Rate Base(L1.L9)**	(51,886)	777	(51,109)

Note: See explanations following GAR-9

U S WEST
Arizona Intrastate Operations
Income Statement Summary
Test Year Ending June 30, 1998
$(000)

		[a]	[b]	[c]	[d]	[e]=a+b+c+d	
		Year Ending June 30, 1998 Intrastate	Accounting Adjustments	Commission Adjustments	Proforma Adjustments	Adjusted Test Year	3 Yr. Rev. Rqmt. Adjustments
Revenues							
1	Local Service Revenues	880,744	0	1,855	(13,227)	869,372	0
2	Network Access Service Revenues	121,936	0	0	(2,066)	119,870	0
3	Long Distance Network Service Rev.	39,559	0	0	(6,913)	32,646	0
4	Miscellaneous	81,628	0	0	7,209	88,837	0
5	Total Oper. Rev. (L1 thru L4)	1,123,866	0	1,855	(14,997)	1,110,724	0
Expenses							
6	Maintenance	235,323	0	0	38,782	274,105	0
7	Engineering Expense	13,771	0	0	3,891	17,662	0
8	Network Operations	34,643	0	0	(9,355)	25,288	0
9	Network Administration	1,933	0	0	70	2,003	0
10	Access Expense	2,040	0	0	(498)	1,542	0
11	Other	2,079	0	0	822	2,901	0
12	Total Cost of Svcs & Products(L6 thru L11)	289,789	0	0	33,712	323,501	0
13	Customer Operations	193,252	0	0	498	193,750	0
14	Corporate Operations	170,108	(1)	(87)	7,542	177,562	5,547
15	Property & Other Taxes	54,687	1	2	(3,259)	51,431	0
16	Uncollectibles	11,377	0	19	(1,612)	9,784	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	429,424	0	(66)	3,169	432,527	5,547
18	Other Operating Income & Expense	1,660	0	512	0	2,172	(663)
19	Depreciation Expense	244,809	0	(13)	19,165	263,961	86,598
20	Universal Service Fund	(1,573)	0	0	0	(1,573)	0
21	Link Up America	(10)	0	0	0	(10)	0
22	Total Operating Expense(L12+L17 thru L21)	964,099	0	433	56,046	1,020,578	91,482
23	Income From Operations (L5-L22)	159,767	0	1,422	(71,043)	90,146	(91,482)
Taxes							
24	Federal Income Tax	41,531	(1,464)	(1,136)	(23,023)	15,908	(29,646)
25	State & Local Income Tax	7,617	(1,452)	(260)	(5,263)	642	(6,777)
26	**Net Operating Income (L23-L24-L25)**	110,619	2,916	2,818	(42,757)	73,596	(55,059)
Other							
27	Nonoperating Income & Expense	6,390	0	0	0	6,390	0
28	Nonoperating Income Tax	(222)	1,047	0	0	825	0
29	Net Operating Earnings (L26-L27-L28)	104,451	1,869	2,818	(42,757)	66,381	(55,059)
30	Interest Expense	40,791	0	4,925	0	45,716	0
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	63,660	1,869	(2,107)	(42,757)	20,665	(55,059)

U S WEST
Arizona Intrastate Operations
Accounting Adjustments Summary
Test Year Ending June 30, 1998
$(000)

		[a]	[b]	[c]=a+b
		Remove Media Split Costs	**Income Tax True-Up**	**Subtotal Accounting Adjustments Included in Test Period**
Revenues				
1	Local Service Revenues	0	0	0
2	Network Access Service Revenues	0	0	0
3	Long Distance Network Service Rev.	0	0	0
4	Miscellaneous	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	0	0
Expenses				
6	Maintenance	0	0	0
7	Engineering Expense	0	0	0
8	Network Operations	0	0	0
9	Network Administration	0	0	0
10	Access Expense	0	0	0
11	Other	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0
13	Customer Operations	0	0	0
14	Corporate Operations	0	0	0
15	Property & Other Taxes	0	0	0
16	Uncollectibles	0	0	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	0	0
18	Other Operating Income & Expense	0	0	0
19	Depreciation Expense	0	0	0
20	Universal Service Fund	0	0	0
21	Link Up America	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	0	0	0
23	Income From Operations (L5-L22)	0	0	0
Taxes				
24	Federal Income Tax	(715)	(749)	(1,464)
25	State & Local Income Tax	(108)	(1,344)	(1,452)
26	**Net Operating Income (L23-L24-L25)**	823	2,093	2,916
Other				
27	Nonoperating Income & Expense	0	0	0
28	Nonoperating Income Tax	1,047	0	1,047
29	Net Operating Earnings (L26-L27-L28)	(224)	2,093	1,869
30	Interest Expense	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0
32	Extraordinary Items	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(224)	2,093	1,869

U S WEST
Arizona Intrastate Operations
Accounting Adjustment
Remove Media Split Cost
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(823)
Net Operating Income	823
Rate Base	0
Revenue Requirement	(1,383)

When the U S WEST Communications and Media Group split occurred in June 1998, the associated costs were booked below the line. However, taxes were inadvertantly booked above the line. The entry was corrected in July of 1998. The above adjustment reflects the correcting entry to the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment
Prior Period Tax Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(2,093)
Net Operating Income	2,093
Rate Base	0
Revenue Requirement	(3,518)

In November of 1997, the tax accounts were adjusted to reflect the 1996 tax return true-up. This true-up relates to a prior period and should be removed from the test year.

U S WEST
Arizona Intrastate Operations
Commission Adjustments Summary
Test Year Ending June 30, 1998
$(000)

		Removal of Merger Costs	Disallowance of Non Employee Concession	Customer Deposits Adjustment	Bellcore Adjustment	Interest Synchronization	Subtotal Commission Adj's to Income
Revenues							
1	Local Service Revenues	0	1,855	0	0	0	1,855
2	Network Access Service Revenues	0	0	0	0	0	0
3	Long Distance Network Service Rev.	0	0	0	0	0	0
4	Miscellaneous	0	0	0	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	1,855	0	0	0	1,855
Expenses							
6	Maintenance	0	0	0	0	0	0
7	Engineering Expense	0	0	0	0	0	0
8	Network Operations	0	0	0	0	0	0
9	Network Administration	0	0	0	0	0	0
10	Access Expense	0	0	0	0	0	0
11	Other	0	0	0	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0	0	0	0
13	Customer Operations	0	0	0	0	0	0
14	Corporate Operations	0	0	0	(87)	0	(87)
15	Property & Other Taxes	0	2	0	0	0	2
16	Uncollectibles	0	19	0	0	0	19
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	21	0	(87)	0	(66)
18	Other Operating Income & Expense	0	0	512	0	0	512
19	Depreciation Expense	(13)	0	0	0	0	(13)
20	Universal Service Fund	0	0	0	0	0	0
21	Link Up America	0	0	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	(13)	21	512	(87)	0	433
23	Income From Operations (L5-L22)	13	1,834	(512)	87	0	1,422
Taxes							
24	Federal Income Tax	9	594	(43)	28	(1,724)	(1,136)
25	State & Local Income Tax	2	136	(10)	6	(394)	(260)
26	**Net Operating Income (L23-L24-L25)**	2	1,104	(459)	53	2,118	2,818
Other							
27	Nonoperating Income & Expense	0	0	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	2	1,104	(459)	53	2,118	2,818
30	Interest Expense	(16)	0	(379)	0	5,320	4,925
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	18	1,104	(80)	53	(3,202)	(2,107)

U S WEST
Arizona Intrastate Operations
Commission Adjustments Summary
Test Year Ending June 30, 1998
$(000)

		Removal of Merger Costs	Disallowance of Non Employee Concession	Customer Deposits Adjustment	Bellcore Adjustment	Interest Synchronization	Subtotal Commission Adj's to Income
Revenues							
1	Local Service Revenues	0	1,855	0	0	0	1,855
2	Network Access Service Revenues	0	0	0	0	0	0
3	Long Distance Network Service Rev.	0	0	0	0	0	0
4	Miscellaneous	0	0	0	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	1,855	0	0	0	1,855
Expenses							
6	Maintenance	0	0	0	0	0	0
7	Engineering Expense	0	0	0	0	0	0
8	Network Operations	0	0	0	0	0	0
9	Network Administration	0	0	0	0	0	0
10	Access Expense	0	0	0	0	0	0
11	Other	0	0	0	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0	0	0	0
13	Customer Operations	0	0	0	0	0	0
14	Corporate Operations	0	0	0	(87)	0	(87)
15	Property & Other Taxes	0	2	0	0	0	2
16	Uncollectibles	0	19	0	0	0	19
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	21	0	(87)	0	(66)
18	Other Operating Income & Expense	0	0	512	0	0	512
19	Depreciation Expense	(13)	0	0	0	0	(13)
20	Universal Service Fund	0	0	0	0	0	0
21	Link Up America	0	0	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	(13)	21	512	(87)	0	433
23	Income From Operations (L5-L22)	13	1,834	(512)	87	0	1,422
Taxes							
24	Federal Income Tax	9	594	(43)	28	(1,724)	(1,136)
25	State & Local Income Tax	2	136	(10)	6	(394)	(260)
26	**Net Operating Income (L23-L24-L25)**	2	1,104	(459)	53	2,118	2,818
Other							
27	Nonoperating Income & Expense	0	0	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	2	1,104	(459)	53	2,118	2,818
30	Interest Expense	(16)	0	(379)	0	5,320	4,925
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	18	1,104	(80)	53	(3,202)	(2,107)

U S WEST
Arizona Intrastate Operations
Commission Adjustment
Removal of Merger Costs
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(13)
Total Operating Income Taxes	11
Net Operating Income	2
Rate Base	0
Revenue Requirement	(3)

In Docket No.(E10-1051-89-311), the Arizona Corporation Commission disallowed costs associated with the merger of the three operating companies owned by U S WEST (Mountain States Telephone and Telegraph, Pacific Northwest Bell, Northwestern Bell). The merger was effective January 1, 1991 and the costs are still being amortized. This adjustment removes the amortization of merger costs from the test period.

U S WEST
Arizona Intrastate Operations
Commission Adjustment
Disallowance of Non-Employee Concession
Test Year Ending June 30, 1998
$000)

Operating Revenues	1,855
Operating Expenses	21
Total Operating Income Taxes	730
Net Operating Income	1,104
Rate Base	0
Revenue Requirement	(1,856)

In Decisions 53849, 54843 & 58927 the Arizona Corporation Commission disallowed non-employee concessions for retired employees and other special interest groups (I.e.,clergy, etc.). This adjustment removes the non-employee concession from test year results.

U S WEST
Arizona Intrastate Operations
Commission Adjustment
Customer Deposits Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	512
Total Operating Income Taxes	(53)
Net Operating Income	(459)
Rate Base	(2,184)
Revenue Requirement	377

In Decisions 53849 and 54843 (Docket Nos. E-1051-83-035 and E-1051-84-100), the Arizona Corporation Commission ordered U S WEST to reflect customer deposits as 100% intrastate and to bring the associated interest into regulated operating results. This adjustment reflects the order at end-of-period test year.

U S WEST
Arizona Intrastate Operations
Commission Adjustment
Cash Working Capital
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	0
Net Operating Income	0
Rate Base	(15,851)
Revenue Requirement	(2,862)

In Decision 54843 (Docket No. E-1051-84-100) the Arizona Corporation Commission adopted Staff's recommendation to exclude non-cash items in the lead-lag studies to determine the amount of cash working capital. This adjustment removes the non-cash items from the rate base.

U S WEST
Arizona Intrastate Operations
Commission Adjustments
Test Year Ending June 30, 1998
Bellcore Adjustment
$(000)

Operating Revenues	0
Operating Expenses	(87)
Total Operating Income Taxes	34
Net Operating Income	53
Rate Base	0
Revenue Requirement	(89)

In Decision 58927 (Docket No. E-1051-93-183) the Arizona Corporation Commission ordered U S WEST to include the Bellcore investment in rate base and exclude the profit component of Bellcore charges from operating expense. This adjustment excludes the profit component from operating expense. The rate base component no longer applies with the sale of Bellcore in November of 1997.

US WEST
Arizona Intrastate Operations
Commission Adjustment
Interest Synchronization
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(2,118)
Net Operating Income	2,118
Rate Base	0
Revenue Requirement	(3,560)

In Decisions 54843, 53849, and 58927 (Docket Nos. E-1051-84-100, and E-1051-83-035 and E-1051-93-183), the Arizona Corporation Commission ordered synchronization of interest expense. This adjustment synchronizes interest expense to the adjusted rate base for the test year.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

GEORGE REDDING

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

Current Responsibilities

I am Director- Regulatory Accounting for U S WEST Communications, located at 1801 California St., Denver, Colorado. My area of responsibility is financial issues as they pertain to the regulatory environment. As such I am responsible for developing revenue requirements for the states of Arizona, Colorado and New Mexico.

Purpose of Testimony

I will present the Company's need for additional revenues in the amount of $225.1M. My testimony will show the inadequacy of the Company's current earnings in the Arizona intrastate jurisdiction. Inadequate earnings mean that U S WEST cannot meet the demands of both growth and more advanced telecommunications services. Additional revenues will provide the cash flow necessary to fund the investment required to meet the demands for new and improved service. Further, my testimony will lay out the development of the additional revenue requirement.

Summary of Testimony

The Company's current operations in Arizona continue to generate subpar earnings and cash flow. In fact, on an intrastate basis, the Company has had a negative cash flow of $(204.4)M over the past five years at the same time that it has invested $1,304M in capital expenditures. Obviously, these opposing trends cannot continue indefinitely. If U S WEST is to provide the modern telecommunications network demanded by its customers in Arizona, it must have the financial means to accomplish this goal. The additional revenue requested in this case will allow the Company an opportunity to earn at an adequate level. These increased earnings will generate improved cash flow that will permit U S WEST to continue to invest in and upgrade the network in Arizona.

My testimony describes the process and elements of a revenue requirement. The majority of my testimony focuses on the description and explanation of the adjustments necessary to properly adjust a test year so that it will be representative of the period after new rates from this proceeding go into effect. In particular I address the following major adjustments:

- End of period adjustment. Because of the use of a fair value rate base, it must be stated at end of period levels. I have moved the entire income statement to an end of period level to be consistent with the rate base. I used the same methodology used to move most of the income statement to and end of period level in the last case; however, I applied the methodology to the entire income statement. This adjustment, to be consistent and fair, must be applied to the entire income statement.
- Depreciation. U S WEST and the Staff of the Commission have entered into a stipulation as to the proper value of depreciation for this case. This stipulation was opposed by several parties, hearings have been held and it is currently pending an order. In the meantime, the Company has put its original advocacy into the revenue requirement; it will, however, replace that with the stipulation if it is adopted.
- Affiliated interest disallowances. In the last case there were numerous disallowances made with respect to affiliated interests. My testimony presents a through description of the items and the reasons why these disallowances are no proper.
- Post Retirement Benefits Other Than Pensions ("PBOPs"). In recent cases the Arizona Corporation Commission has outlined standards for accepting PBOPs. U S WEST can and will meet those standards and is requesting recognition of PBOPs in this case.

In summary, I present a through discussion of the need for additional revenues and the rationale for the adjusted test year that quantifies this need. This test year, along with the rate of return discussed by Mr. Cummings, will produce additional revenues that will allow U S WEST to meet its customer's needs for modern telecommunications service in Arizona.

Q. PLEASE STATE YOUR NAME, TITLE, EMPLOYER AND ADDRESS.

A. My name is George Redding. I am employed by U S WEST Communications ("U S WEST", the "Company") as a Director, Regulatory Accounting. My business address is 1801 California, Denver, Colorado.

Q. PLEASE LIST YOUR QUALIFICATIONS AND EXPERIENCE.

A. I have a Bachelor of Science in Business Administration degree from the University of Montana and a Juris Doctor from the University of Colorado. I hold both a CPA certificate in Montana as well as Membership in the Bar in Colorado. I have worked for U S WEST since 1977 and have held a number of positions in Regulatory and Corporate Accounting. I have testified to financial matters before the Arizona Corporation Commission, the Colorado Public Utility Commission, the Public Service Commission of Utah and the Public Utility Commission of Idaho.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AND EXHIBIT?

A. I will present the Company's need for additional revenues in the amount of $225.9M. My testimony will show the inadequacy of the Company's current earnings in the Arizona intrastate jurisdiction. Inadequate earnings mean that U S WEST cannot meet the demands of both growth and more advanced telecommunications services. Additional revenues will provide the cash flow necessary to fund the investment required to meet the demands for new and improved service. Further, my testimony will lay out the development of the additional revenue requirement.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. It is segregated into the following sections:

I. A discussion of Arizona's financial performance and the underlying reasons for U S WEST's request for additional revenues.

II. The development of the additional revenue requirement.

III. The selection of the test year used for calculating the additional revenue requirement.

IV. The development of the original cost and fair value rate base.

V. A description of the types of adjustments made to the test year.

VI. An explanation of certain of the specific adjustments made to the test year.

VII. Other items.

VIII. A summary of my recommendations.

I. FINANCIAL PERFORMANCE

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. I will show that the Arizona intrastate operations have earned at an inadequate level over the past five years. I will compare the Arizona returns with those of the Company as a whole on an intrastate basis. Earnings are the fundamental driver of cash flow, and the adequacy of cash flow is the driver for additional investment. In the recent past Arizona's intrastate cash flow levels have been inadequate to support the levels of investment the Company has made and needs to continue to make in the state to support the demand for new and advanced telecommunications services in Arizona.

Q. WHAT YEARS DO YOUR COMPARISONS COVER?

A. They are made for the years 1993 through 1997.

Q. WHAT ARE THE RETURNS FOR THE ARIZONA INTRASTATE OPERATIONS FROM 1993 THROUGH 1997? HOW DO THEY COMPARE TO COMPANY RETURNS?

A. The returns on equity are as follows:

Intrastate Return on Equity	1993	1994	1995	1996	1997
Arizona - achieved	-0.89%	1.93%	6.57%	7.32%	7.92%
- current authorized	13.75%	13.75%	11.40%	11.40%	11.40%
Company – 14 state achieved	8.40%	8.75%	10.21%	11.03%	9.95%

For comparison purposes, the average cost of debt over the same period was:

Average Cost of Debt	1993	1994	1995	1996	1997
Arizona	7.33%	6.87%	7.60%	6.57%	7.56%

Equity is considered a riskier investment than debt and therefore has a higher cost than debt. Yet, only in the last two years has the Arizona intrastate jurisdiction had equity earnings higher than the average cost of debt, and that only by a small margin. At no time have the equity returns approached those found appropriate by the Commission. It is readily apparent from this comparison that the returns earned by Arizona intrastate operations have been inadequate. Clearly rates from the last rate case, which went into effect in January of 1995, have helped, but they still have not raised earnings to an adequate level.

Q. DO THE RETURNS YOU SHOW REFLECT THE VARIOUS ADJUSTMENTS MADE BY THE ARIZONA COMMISSION IN THE LAST RATE CASE?

A. No, they do not. While disallowances may be made during the process of a rate case, they are not recorded on the Company's books of account. They are not taken into account on the booked results of the Company since they have no accounting justification. Some of our competitors, such as AT&T and MCI, are not rate of return regulated and do not have disallowances. The returns they show on their books are not adjusted. In examining U S WEST's actual earned returns, disallowances should not be taken into account either.

Q. WHAT DO YOU CONCLUDE FROM THESE RETURNS?

A. Current rates are barely adequate to cover the cost of debt, much less equity, and in light of the capital expenditures being made in Arizona, need to be increased.

Q. WHAT FACTORS INFLUENCE CAPITAL EXPENDITURES?

A. First, capital expenditures are the lifeblood of the future. Arizona has experienced tremendous growth. Also, customers are demanding more advanced telecommunications services. On top of this, Arizona has a harsh climate, which is hard on equipment and tends to shorten its useful life. All of these factors drive the need for heavy investment. In fact, capital expenditures in Arizona have grown from $251M in 1993 to $457M in 1997. On an intrastate basis, this equates to $187M in 1993 and $335M in 1997. This level of investment cannot be maintained without adequate earnings and cash flow.

Q. PLEASE DISCUSS THE RELATIONSHIP BETWEEN EARNINGS AND CASH FLOW.

A. In the Company's cash flow statements as shown in its filings with the Securities and Exchange Commission ("SEC"), cash flow is divided into three parts – operating, investing and financing. Operating cash flow is the major source of cash, and earnings before depreciation constitute the lion's share of operating cash flow. Investing is basically the Company's capital expenditures, which is the primary user of operating cash flow. Financing is the balancing section. It consists of changes in debt levels, the proceeds of new equity issues and the dividends paid on outstanding equity. In times of shortfall, when investing exceeds operating cash flow, financing activities can make up the difference. However, over the long pull using financing to cover deficits in operating cash flow is unhealthy for the Company. Either investments must slow down or cash from operations must increase.

Q. HAVE YOU DEVELOPED A CASH FLOW FOR ARIZONA OPERATIONS?

A. Yes, I have. While I cannot mirror a cash flow consistent with our SEC filings, because not all portions of the balance sheet are maintained on an individual state basis, I can develop a meaningful representation of cash flow on a state basis. As I stated earlier operating results or earnings are the main driver of cash inflows. Also, capital expenditures are the main outflow. Both of these elements are maintained on a state basis.

Q. HOW IS ARIZONA DOING FROM A CASH FLOW PERSPECTIVE?

A. As is the case with earnings, operating cash flow has improved since rates from the last case went into effect. However, Arizona still lags behind the Company, which is the composite of all the states in which U S WEST operates. In the table below, I show two things:

- the amount of operating cash flow available after capital expenditures; and
- the percent of operating cash flow available after capital expenditures.

Intrastate Operating Cash Flow after Capital Expenditures $(Millions)	1993	1994	1995	1996	1997
Arizona – Amount	$38.1	$14.4	$1.5	$16.6	$31.7
Percent	16.9%	6.3%	0.6%	5.3%	8.7%
Company (14 states)– Amount	$4.2	$1125.2	$458.5	$777.6	$1042.7
Percent	0.3%	40.3%	19.1%	28.3%	36.4%

This shows an inadequate cash flow after capital expenditures for Arizona. Other items such as income taxes and interest must also be paid out of this remaining cash flow as shown in the following table:

Operating Cash Flow After Capital Expenditures, Interest & Income Taxes ($Millions)	1993	1994	1995	1996	1997
Arizona	$ 3.6	$(27.3)	$(47.9)	$(54.9)	$(77.9)
Company	$(477.4)	$ 630.6	$(233.4)	$ 825.5	$240.1

When interest and taxes are deducted from the remaining operating cash flow after capital expenditures, the net cash flow for Arizona is negative in all but one year. The Company, as a whole, fared considerably better with positive margins in three of the past five years.

Q. PLEASE SUMMARIZE THIS PORTION OF YOUR TESTIMONY.

A. The Company's current operations in Arizona continue to generate subpar earnings and cash flow. In fact, on an intrastate basis, the Company has had a negative cash flow of $(204.4)M over the past five years at the same time that it has invested $1.3B in capital expenditures. Obviously, these opposing trends cannot continue indefinitely. If U S WEST is to provide the modern telecommunications network demanded by its customers in Arizona, it must have the financial means to accomplish this goal. The additional revenue requested in this case will allow the Company an opportunity to earn at an adequate level. These increased earnings will generate improved cash flow that will permit U S WEST to continue to invest in and upgrade the network in Arizona.

II. DEVELOPMENT OF THE REVENUE REQUIREMENT

Q. HOW IS THE REVENUE REQUIREMENT CALCULATED?

A. The basic formula involves multiplying the rate base by the overall rate of return to arrive at an overall earnings requirement. The adjusted earnings from the test year are then subtracted from the total earnings requirement to arrive at the additional income required. This result is then multiplied by a factor to recognize taxes and uncollectibles to arrive at the additional revenue requirement. The revenue requirement is developed on both the original cost rate base and the fair value rate base. This calculation is shown on Exhibit GAR-1.

Q. WHAT IS THE ADDITIONAL REVENUE REQUIREMENT?

A. It is $225.9M on the original cost rate base and $273.3 on the fair value rate base. There are two parts to this additional revenue requirement. The first part is an ongoing requirement for an additional $142.6M annually on the original cost rate base. The second portion is a three year revenue requirement of $83.3M per year. This three year revenue requirement is composed of items having a limited life. It consists primarily of the reserve deficiency portion of the depreciation adjustment which is discussed at Section VI, B of my testimony. The remaining portion of the three year revenue requirement is discussed at Section VI, E of my testimony.

Q. WILL YOU ADDRESS ALL ELEMENTS OF THE REVENUE REQUIREMENT IN DETAIL IN YOUR TESTIMONY?

A. No, I will not. I will discuss the selection of the test year, the original cost and fair value rate base, the types of adjustments to the test year, and details of certain adjustments in subsequent portions of my testimony. The discussion of the various adjustments will include, where appropriate, any adjustments to the rate base.

Q. WHAT ITEMS ARE YOU NOT DISCUSSING?

A. The appropriate rate of return, for one. Mr. Cummings will address that in detail in his testimony. I have included a calculation of the overall cost of capital at Exhibit GAR-2, but the elements all come from Mr. Cummings. The other item I will not discuss in detail is the income to revenue multiplier, which is used to convert the additional earnings requirement to an additional revenue requirement. The multiplier takes into account the additional income and other taxes, and uncollectibles that will be incurred on any additional revenues collected. I have included the calculation of the multiplier at Exhibit GAR-3. The elements used are the same as in prior cases.

III. TEST YEAR

Q. WHAT TEST YEAR HAVE YOU CHOSEN?

A. The revenue requirement I have developed is based on a fully adjusted test year comprising the twelve months ended June 30, 1998.

Q. WHY DID YOU CHOOSE THIS TEST YEAR?

A. The primary purpose of a test year is to provide a reasonable proxy for the period when new rates will be in effect. In Arizona, the Commission Rules require a historic test year. Therefore I have chosen the most recent twelve months that were available at the time of this filing and that allowed time for the necessary work required to develop the Reproduction Cost New Less Depreciation (RCND) study. This resulted in my choice of the twelve months ended June 30, 1998.

IV. ORIGINAL COST AND FAIR VALUE RATE BASE

Q. WHAT ARE THE ELEMENTS OF THE RATE BASE?

A. The elements of the original cost end of period rate base are as follows:

Plant in Service
+ Short Term Plant Under Construction
+ Materials & Supplies
+ Allowance for Cash Working Capital
- Depreciation Reserve
- Accumulated Deferred Income Taxes
- Customer Deposits
- Deposits for Land Development Agreements
- Other Assets & Liabilities Related to Rate Base
= Original Cost Rate Base

Together these items comprise the original cost rate base. All elements are stated at end of period levels, in this case, as of June 30, 1998. The basic elements are the same as used in U S WEST's last rate case. The rate base is adjusted in the same manner as the income statement for the impacts of accounting, commission and pro forma adjustments. These adjustments are described in detail in my Exhibit and some of them are discussed specifically in Section VI of my testimony. The original cost rate base and the adjustments thereto are shown on Exhibit GAR-4, Page 1.

Q. DO YOU CALCULATE A FAIR VALUE RATE BASE?

A. Yes, I do. It is shown on Exhibit GAR-4, Page 2. To develop the fair value rate base I used 50% of the original cost Plant in Service and Depreciation Reserve and 50% of the Reproduction Cost New Less Depreciation ("RCND"). The RCND was developed by Ms. Heller-Hughes of the engineering firm of R. W. Beck. All other elements of the fair value rate base are the same as for the original cost rate base. This development of the fair value rate base is consistent with the formulation in prior cases.

V. ADJUSTMENTS TO THE TEST YEAR

Q. WHAT KINDS OF ADJUSTMENTS WILL YOU PRESENT IN THIS CASE?

A. Adjustments are a necessary component of the test year construct. As I stated in my last section, the purpose of a test year is to develop a reasonable proxy for the period when rates will go into effect. In order to make a test year into a reasonable proxy, it is necessary to adjust the historical results. I will present three types of such adjustments – Accounting, Commission and Pro Forma. These adjustments are summarized on Exhibit GAR-5.

Q. PLEASE DESCRIBE THEM.

A. Accounting adjustments are made to remove items booked during the test year that belong to another period or to include items outside of the test year that belong to the test period. The most common accounting adjustment is for income taxes; they are estimated during the year, but are not trued up until after the income tax return is filed. This happens long after the close of each calendar year.

One of my pro forma adjustments has a major impact on the accounting adjustments. This pro forma adjustment moves the entire income statement to end of period levels. I will describe this in detail in my discussion of individual adjustments. In most cases, accounting adjustments are merely added to or subtracted from booked results. However, because I restated the income statement to end of period volumes, I changed this process. Since most of the end of period adjustment was calculated by annualizing the last month or months of the year, many of the accounting adjustments that related to other months of the test year were not used or needed. Those that impacted the months being annualized were made before those months were annualized, i.e. the base for the annualization rather than the annualization itself was adjusted. Since some accounting adjustments, where applicable, were included in the base for the end of period adjustment, it would be inappropriate to include them a second time.

Q. ARE THERE SOME ACCOUNTING ADJUSTMENTS THAT ARE DIRECTLY INCLUDED IN YOUR CALCULATION OF THE REVENUE REQUIREMENT?

A. Yes, there are. I will describe them in my discussion of specific adjustments.

Q. ARE THE ACCOUNTING ADJUSTMENTS INCLUDED IN YOUR EXHIBITS?

A. Yes, they are. I am presenting two lists of accounting adjustments. The first includes those adjustments that are directly included in the development of the revenue requirement (see Exhibit GAR-6). The second group includes the accounting adjustments that are not directly included because of the end of period adjustment (see Exhibit GAR-10). I included the second group to make them available if the end of period adjustment itself is modified; in that instance it may be proper to include all or some of them in arriving at test year results.

Q. IF YOU ARE FINISHED WITH YOUR OVERVIEW OF ACCOUNTING ADJUSTMENTS, PLEASE CONTINUE WITH YOUR EXPLANATION OF TYPES OF ADJUSTMENTS.

A. The next type of adjustments are Commission adjustments, which are made to conform to prior orders or practices. These adjustments are shown in detail at Exhibit GAR-7.

Q. HAVE YOU MADE ALL ADJUSTMENTS THAT THE COMMISSION FOUND IN THE LAST CASE?

A. No. However, there are several adjustments the Company has chosen not to contest. Adjustments that U S WEST disagrees with are not included. They are discussed in Section VI, F of my testimony.

There is one adjustment that merits further comment here and that, again, is the end of period adjustment. The Commission ordered certain end of period adjustments in the last case for all elements of the income statement except the non-wage portion of expenses. Since my adjustment brings the entire income statement to an end of period level as a single adjustment, I have chosen to reflect this as a pro forma adjustment. However, it is important to note that I used the methodology accepted in the last case in my development of the end of period adjustment.

Q. THIS LEAVES JUST ONE TYPE OF ADJUSTMENT – PRO FORMA. PLEASE EXPLAIN.

A. Pro forma adjustments are used to make the test year more representative of the future. Especially when a historical test period is used, pro forma adjustments are required to reflect events occurring after the end of the test year. A perfect example is wages. Subsequent to the end of the test year, the Company negotiated a new three year agreement with its labor unions. Increases in wages and benefits resulting from this agreement need to be reflected in the test year if it is to be used as a reasonable proxy for the future, when new rates will go into effect.

As was the case with accounting adjustments, I am presenting two lists of pro forma adjustments. The first includes those adjustments that are directly included in the development of the revenue requirement (see Exhibit GAR-8). The second group includes the pro forma adjustments that are not directly included because of the end of period adjustment (see GAR-11). Again, the second group is included to make them available if the end of period adjustment itself is modified; in that instance it may be proper to include all or some of them in arriving at test year results.

Q. HOW DOES THE TEST OF KNOWN AND MEASURABLE IMPACT THE DEVELOPMENT OF PRO FORMA ADJUSTMENTS?

A. Adjustments must be known, such as a wage adjustment that will take place on a date certain. They also need to be measurable, that is, the price level change must be known or be reasonably estimable.

VI. EXPLANATION OF ADJUSTMENTS

Q. ARE YOU GOING TO EXPLAIN ALL OF YOUR ADJUSTMENTS IN YOUR TESTIMONY?

A. No, I am not. Each adjustment is explained in my Exhibit, beginning at Exhibit GAR-6. Each adjustment is set forth individually, showing its impact on both the income statement and the rate base. Each one also has an explanation. What I will do in my testimony is elaborate on certain adjustments.

A. END OF PERIOD ADJUSTMENT

Q. YOU HAVE MENTIONED THE END OF PERIOD ADJUSTMENT SEVERAL TIMES ALREADY IN YOUR TESTIMONY. PLEASE EXPLAIN THIS ADJUSTMENT.

A. Because of the Arizona Constitutional requirement of a fair value rate base, the rate base is necessarily stated at an end of period level. However, the income statement, as recorded, is stated at an average level of occurrences throughout the year. That is, it reflects the volumes that were in existence throughout the year. For example, the number of access lines, which are a prime driver of revenues collected, fluctuates throughout the year. Also, employee levels change throughout the year. What the end of period adjustment does is to restate these varying volumes and prices to an end of period level. When this adjustment is made both income statement and rate base are stated on a consistent basis.

Q. HOW DOES THIS FIT IN WITH THE KNOWN AND MEASURABLE TEST?

A. Quite well. The average volumes and price levels that occur throughout the year and at the end of the year are reasonably known and can be reasonably measured.

Q. YOU STATED EARLIER THAT YOU WERE TAKING THE ENTIRE INCOME STATEMENT TO END OF PERIOD LEVELS. IS THIS IMPORTANT?

A. It is very important. Given the requirement for an end of period rate base, it is logical to also state the income statement at the same level. However, I do have a problem with picking and choosing. This can lead to a great deal of mischief and cause the test year to be misleading. For example, if revenue volumes and employee levels were both rising over the course of the year, an adjustment that took only the revenues to end of period levels would obviously mistate the test year and provide a poor proxy for the period when new rates will be in effect.

Q. PLEASE EXPLAIN THE MAJOR ELEMENTS OF THIS ADJUSTMENT.

A. An end of period adjustment has two parts. The first is price level changes. The second portion of the adjustment is related to volume changes. As I explain below, the end of period adjustment combines both the price level and volume changes in a single step. This is consistent with the development accepted in the last rate case, which basically annualized the last month of the test year. Examination of June 1998, the last month in the test year I chose revealed that it was consistent with trends shown by prior months.

Q. PLEASE GO THROUGH THE INCOME STATEMENT BY MAJOR CATEGORY EXPLAINING HOW THE ADJUSTMENT WAS CALCULATED.

A. First is revenues. While a long and detailed study of the volumes underlying each revenue line item could be made, a reasonable approximation of the end of period volumes and price levels can be made by taking the last month of actual revenues and annualizing them. This is the method that was used in the last case, and the one I have used here.

Q. WHAT ABOUT EXPENSES?

A. Expenses were split apart in several pieces. Since depreciation is the subject of a separate Docket, I have shown it as a separate adjustment. I will discuss this adjustment in more detail later. Certain items, such as property taxes and uncollectibles, were treated separately and stated at end of period levels. All remaining expenses were then broken apart into wage and non-wage components. Both of these components were then brought to end of period levels by annualizing the last month of the test year. Again, for the wage component, this was the method used and accepted in the last rate case. The non-wage portions were not brought to end of period levels in the last case, but I used the same method in this filing to be consistent.

B. DEPRECIATION CHANGES

Q. PLEASE DESCRIBE YOUR DEPRECIATION ADJUSTMENT.

A. On November 12 & 13, 1998, hearings were held *on* U S WEST's application for a change in depreciation rates. Prior to the hearings the Company and the Staff of the Commission had reached a settlement relating to new depreciation rates and an amortization of certain plant to be upgraded. At the time of filing this testimony, there has been no decision on this issue. Therefore, the depreciation adjustment I am making in my filing is the Company's original position that requested economic lives for plant and a three year amortization of its reserve deficiency. This does not mean that the Company no longer supports its agreement with staff; rather it is a placeholder until the depreciation issue is decided.

Q. HOW IS YOUR ADJUSTMENT STRUCTURED?

A. It is broken into two parts. The first adjustment applies the new depreciation rates against the end of period plant balances. This also results in depreciation expense being stated at an end of period level. This adjustment is detailed separately on Exhibit GAR-8C, but is actually part of the end of period adjustment. I prepared a separate exhibit page for this piece of the end of period adjustment since it is the subject of a separate proceeding.

Q. WHAT ABOUT THE SECOND PIECE OF THE ADJUSTMENT?

A. The second adjustment reflects the reserve deficiency amortization. Together with the adjustment related to rates it comprises the total proposed adjustment for depreciation. However, this portion of the adjustment is shown as a three year revenue requirement since it has a limited duration. It is combined with other one-time items discussed in Section VI. E. of my testimony.

C. PENSION ADJUSTMENT

Q. PLEASE DESCRIBE YOUR ADJUSTMENTS RELATED TO PENSIONS.

A. My first adjustment relates to pension credits that were booked in the third quarter of 1998 and the amount expected to be recorded in the fourth quarter of 1998. These credits are a true up to pension expense for the calendar year 1998. These additional credits have the effect of reducing pension expense by an additional $7.4M.

Q. THIS ADJUSTMENT, THEN, LOWERS THE REQUESTED REVENUE REQUIREMENT IN THIS CASE.

A. That is correct. However, this credit is a non-cash item.

Q. WHAT EFFECT DOES THE CASH OR NON-CASH BASIS OF THIS EXPENSE HAVE?

A. If the pension asset is treated correctly, then the non-cash nature of this adjustment is not an issue.

Q. PLEASE EXPLAIN.

A. The customer will benefit from the pension credit in the form of reduced revenue requirements, similar to the past when they benefited from pension credits the Company recorded in the late 80's and early 90's. Pension credits, which are a non-cash item, reduce the revenue requirement. However, this reduction is a cash item. By this I mean that the revenues collected from customers are lower because of the inclusion of the pension credit in the development of the revenue requirement. Since the earnings of the pension plan cannot be withdrawn, the Company's investors have to contribute the cash required to fund this reduction in revenue requirements generated by the pension credits. The equitable balance

U S WEST
Arizona Intrastate Operations
Proforma Adjustments Summary
Test Year Ending June 30, 1998
$(000)

		[a] End of Period Annualization	[b] Wage & Salaries Adjustment	[c] Depreciation	[d] Pension Asset	[e] OPEB Adjustment	[f]=sum(a.e) Summary Proforma Adj's
Revenues							
1	Local Service Revenues	(13,227)	0	0	0	0	(13,227)
2	Network Access Service Revenues	(2,066)	0	0	0	0	(2,066)
3	Long Distance Network Service Rev.	(6,913)	0	0	0	0	(6,913)
4	Miscellaneous	7,209	0	0	0	0	7,209
5	Total Oper. Rev. (L1 thru L4)	(14,997)	0	0	0	0	(14,997)
Expenses							
6	Maintenance	27,853	5,344	0	167	5,418	38,782
7	Engineering Expense	3,568	177	0	(282)	428	3,891
8	Network Operations	(10,483)	930	0	(4,897)	5,095	(9,355)
9	Network Administration	(98)	55	0	7	106	70
10	Access Expense	(498)	0	0	0	0	(498)
11	Other	819	1	0	0	2	822
12	Total Cost of Svcs & Products(L6 thru L11)	21,161	6,507	0	(5,005)	11,049	33,712
13	Customer Operations	(7,947)	3,731	0	(2,369)	7,083	498
14	Corporate Operations	4,314	1,438	0	0	1,790	7,542
15	Property & Other Taxes	(3,259)	0	0	0	0	(3,259)
16	Uncollectibles	(1,612)	0	0	0	0	(1,612)
17	Tot Selling, Gen. & Admin.(L13 thru L16)	(8,504)	5,169	0	(2,369)	8,873	3,169
18	Other Operating Income & Expense	0	0	0	0	0	0
19	Depreciation Expense	0	0	19,165	0	0	19,165
20	Universal Service Fund	0	0	0	0	0	0
21	Link Up America	0	0	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	12,657	11,676	19,165	(7,374)	19,922	56,046
23	Income From Operations (L5-L22)	(27,654)	(11,676)	(19,165)	7,374	(19,922)	(71,043)
Taxes							
24	Federal Income Tax	(8,962)	(3,784)	(6,211)	2,390	(6,456)	(23,023)
25	State & Local Income Tax	(2,048)	(865)	(1,420)	546	(1,476)	(5,263)
26	**Net Operating Income (L23-L24-L25)**	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)
Other							
27	Nonoperating Income & Expense	0	0	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)
30	Interest Expense	0	0	0	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0	0	0	0
32	Extraordinary Items	0	0	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(16,644)	(7,027)	(11,534)	4,438	(11,990)	(42,757)

U S WEST
Arizona Intrastate Operations
Proforma Adjustment
End of Period Annualization Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	(14,997)
Operating Expenses	12,657
Total Operating Income Taxes	(11,010)
Net Operating Income	(16,644)
Rate Base	0
Revenue Requirement	27,975

In Decision 58927 (Docket No E-1051-93-183) the Arizona Corporation Commission ordered U S WEST to synchronize test year revenues and various expenses with the end-of-period rate base. This adjustment synchronizes the entire income statement with the end-of-period rate base.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment
Test Year Ended June 30, 1998
Wage and Salary Increase
$(000)

Operating Revenues	0
Operating Expenses	11,676
Total Operating Income Taxes	(4,649)
Net Operating Income	(7,027)
Rate Base	0
Revenue Requirement	11,811

Effective August 15, 1998 U S WEST incurred additional salary and wage expenses for occupational employees. On March 1, 1999 U S WEST will incur additional salary and wage expenses for management employees. This adjustment reflects the salary and wage increases.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment
Depreciation
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	19,165
Total Operating Income Taxes	(7,631)
Net Operating Income	(11,534)
Rate Base	(11,534)
Revenue Requirement	17,304

This adjustment reflects the annual impact of the Company's proposed depreciation represcription.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment
Pension Asset
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(7,374)
Total Operating Income Taxes	2,936
Net Operating Income	4,438
Rate Base	64,057
Revenue Requirement	4,106

This adjustment reflects the incremental difference between the normal pension expense credit and the 3rd quarter 1998 and estimated 4th quarter 1998 credit per SFAS 87. It also reflects the incremental difference in the pension asset because of the expense credit booked. The adjustment also reflects the reduction to the pension asset and pension liability for a transfer from the pension fund to retiree healthcare claims in accordance with IRC Section 420.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment
PBOP Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	19,922
Total Operating Income Taxes	(7,932)
Net Operating Income	(11,990)
Rate Base	985
Revenue Requirement	20,330

This adjustment restates the test year Post Retirement Benefits Other than Pensions at the level required by SFAS 106.

U S WEST
Arizona Intrastate Operations
Three Year Revenue Requirement Adjustments Summary
Test Year Ending June 30, 1998
$(000)

		Depreciation Reserve Deficiency Amortization	Year 2000 Costs	Bellcore Gain from Sale	Subtotal 3 Yr. Rev. Rqmt. Adjustments
Revenues					
1	Local Service Revenues	0	0	0	0
2	Network Access Service Revenues	0	0	0	0
3	Long Distance Network Service Rev.	0	0	0	0
4	Miscellaneous	0	0	0	0
5	Total Oper. Rev. (L1 thru L4)	0	0	0	0
Expenses					
6	Maintenance	0	0	0	0
7	Engineering Expense	0	0	0	0
8	Network Operations	0	0	0	0
9	Network Administration	0	0	0	0
10	Access Expense	0	0	0	0
11	Other	0	0	0	0
12	Total Cost of Svcs & Products(L6 thru L11)	0	0	0	0
13	Customer Operations	0	0	0	0
14	Corporate Operations	0	5,547	0	5,547
15	Property & Other Taxes	0	0	0	0
16	Uncollectibles	0	0	0	0
17	Tot Selling, Gen. & Admin.(L13 thru L16)	0	5,547	0	5,547
18	Other Operating Income & Expense	0	0	(663)	(663)
19	Depreciation Expense	86,210	388	0	86,598
20	Universal Service Fund	0	0	0	0
21	Link Up America	0	0	0	0
22	Total Operating Expense(L12+L17 thru L21)	86,210	5,935	(663)	91,482
23	Income From Operations (L5-L22)	(86,210)	(5,935)	663	(91,482)
Taxes					0
24	Federal Income Tax	(27,938)	(1,923)	215	(29,646)
25	State & Local Income Tax	(6,386)	(440)	49	(6,777)
26	**Net Operating Income (L23-L24-L25)**	(51,886)	(3,572)	399	(55,059)
Other					
27	Nonoperating Income & Expense	0	0	0	0
28	Nonoperating Income Tax	0	0	0	0
29	Net Operating Earnings (L26-L27-L28)	(51,886)	(3,572)	399	(55,059)
30	Interest Expense	0	0	0	0
31	Juris Diff & Nonreg Net Income	0	0	0	0
32	Extraordinary Items	0	0	0	0
33	**Net Income (L29-L30-L31-L32)**	(51,886)	(3,572)	399	(55,059)

U S WEST
Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment
Depreciation Reserve Deficiency Amortization
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	86,210
Total Operating Income Taxes	(34,324)
Net Operating Income	(51,886)
Rate Base	(51,886)
Revenue Requirement	77,840

This adjustment reflects a 3 year
reserve deficiency amortization.

U S WEST
Arizona Intrastate Operations
Three Year Revenue Requirement Adjustments
Test Year Ending June 30, 1998
Year 2000 Costs
$(000)

Operating Revenues	0
Operating Expenses	5,935
Total Operating Income Taxes	(2,363)
Net Operating Income	(3,572)
Rate Base	777
Revenue Requirement	6,144

The Company has incurred and expects to incur software costs and to install additional computer hardware to meet the requirements of the Year 2000. This adjustment amortizes those costs over a 3 year period.

U S WEST
Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment
Gain from Bellcore Sale
Test Year Ending June 30, 1998
$(000)

Operating Expenses	(663)
Total Operating Income Taxes	264
Net Operating Income	399
Rate Base	0
Revenue Requirement	(671)

In Decision 60382 Docket No. (E-1051-97-139) the Arizona Corporation Commission approved U S WEST's sale of its share in Bellcore. The Commission also deferred ratemaking treatment to the next general rate case. Consistent with that order, U S WEST proposes that 50% of the intrastate gain on the sale be amortized to the ratepayers over three years. This adjustment accounts for that proposed treatment.

U S WEST
Arizona Intrastate Operations
Accounting Adjustments Not Included Summary
Test Year Ending June 30, 1998
$(000)

		Compensated Absence Dropoff	Merit Award	Medical Dental Accrual Dropoff	Expense Limit Change	Remove Out of Period Revenue
Revenues						
1	Local Service Revenues					(2,150)
2	Network Access Service Revenues					
3	Long Distance Network Service Rev.					
4	Miscellaneous					
5	Total Oper. Rev. (L1 thru L4)	0	0	0	0	(2,150)
Expenses						
6	Maintenance					
7	Engineering Expense					
8	Network Operations					
9	Network Administration					
10	Access Expense					
11	Other					
12	Total Cost of Services & Products(L6 thru L11)	0	0	0	0	0
13	Customer Operations					
14	Corporate Operations	(791)	(398)	(102)	0	
15	Property & Other Taxes					(2)
16	Uncollectibles					(22)
17	Tot Selling, General & Admin.(L13 thru L16)	(791)	(398)	(102)	0	(24)
18	Other Operating Income & Expense					
19	Depreciation Expense				353	
20	Universal Service Fund					
21	Link Up America					
22	Total Operating Expense(L12+L17 thru L21)	(791)	(398)	(102)	353	(24)
23	Income From Operations (L5-L22)	791	398	102	(353)	(2,126)
Taxes						
24	Federal Income Tax	256	151	27	(114)	(689)
25	State & Local Income Tax	59	25	3	(26)	(157)
26	**Net Operating Income (L23-L24-L25)**	476	222	72	(213)	(1,280)
Other						
27	Nonoperating Income & Expense					
28	Nonoperating Income Tax					
29	Net Operating Earnings (L26-L27-L28)	476	222	72	(213)	(1,280)
30	Interest Expense					
31	Juris Diff & Nonreg Net Income					
32	Extraordinary Items					
33	**Net Income (L29-L30-L31-L32)**	476	222	72	(213)	(1,280)

U S WEST
Arizona Intrastate Operations
Accounting Adjustments Not Included Summary
Test Year Ending June 30, 1998
$(000)

		Directory Surcharge Adjustment	Telephone Assistance Plan Adjustment	Property Tax Adjustment	Affiliated Interest Billing True-Up	FICA & Savings Plan Contributions
Revenues						
1	Local Service Revenues	(13,844)	(1,354)			
2	Network Access Service Revenues					
3	Long Distance Network Service Rev.					
4	Miscellaneous					
5	Total Oper. Rev. (L1 thru L4)	(13,844)	(1,354)	0	0	0
Expenses						
6	Maintenance					(306)
7	Engineering Expense					(14)
8	Network Operations					(52)
9	Network Administration				(72)	(4)
10	Access Expense					0
11	Other					(3)
12	Total Cost of Services & Products(L6 thru L11)	0	0	0	(72)	(379)
13	Customer Operations				(685)	(211)
14	Corporate Operations	0			1,339	(80)
15	Property & Other Taxes	(16)	(2)	1,516		
16	Uncollectibles	(143)	(14)			
17	Tot Selling, General & Admin.(L13 thru L16)	(159)	(16)	1,516	654	(291)
18	Other Operating Income & Expense					
19	Depreciation Expense					
20	Universal Service Fund					
21	Link Up America					
22	Total Operating Expense(L12+L17 thru L21)	(159)	(16)	1,516	582	(670)
23	Income From Operations (L5-L22)	(13,685)	(1,338)	(1,516)	(582)	670
Taxes						
24	Federal Income Tax	(4,435)	(434)	(491)	(189)	217
25	State & Local Income Tax	(1,014)	(99)	(112)	(43)	50
26	**Net Operating Income (L23-L24-L25)**	(8,236)	(805)	(913)	(350)	403
Other						
27	Nonoperating Income & Expense					
28	Nonoperating Income Tax					
29	Net Operating Earnings (L26-L27-L28)	(8,236)	(805)	(913)	(350)	403
30	Interest Expense					
31	Juris Diff & Nonreg Net Income					
32	Extraordinary Items					
33	**Net Income (L29-L30-L31-L32)**	(8,236)	(805)	(913)	(350)	403

U S WEST
Arizona Intrastate Operations
Accounting Adjustments Not Included Summary
Test Year Ending June 30, 1998
$(000)

		Pension Plan Contributions	Toll Revenue Billing True-Up	Remove Test Period Year 2000 Costs	Remove Test Period Accounting Adjustments AA-01 - AA-13	Total
Revenues						
1	Local Service Revenues				17,348	0
2	Network Access Service Revenues				0	0
3	Long Distance Network Service Rev.		(1,593)		1,593	0
4	Miscellaneous				0	0
5	Total Oper. Rev. (L1 thru L4)	0	(1,593)	0	18,941	0
Expenses					0	0
6	Maintenance	120			186	0
7	Engineering Expense	6			8	0
8	Network Operations	20			32	0
9	Network Administration	1			75	0
10	Access Expense	0			0	0
11	Other	1			2	0
12	Total Cost of Services & Products(L6 thru L11)	148	0	0	303	0
13	Customer Operations	83			813	0
14	Corporate Operations	32		(3,864)	3,864	0
15	Property & Other Taxes		(2)		(1,494)	0
16	Uncollectibles		(16)		195	0
17	Tot Selling, General & Admin.(L13 thru L16)	115	(18)	(3,864)	3,378	0
18	Other Operating Income & Expense				0	0
19	Depreciation Expense			(670)	317	0
20	Universal Service Fund				0	0
21	Link Up America				0	0
22	Total Operating Expense(L12+L17 thru L21)	263	(18)	(4,534)	3,998	0
23	Income From Operations (L5-L22)	(263)	(1,575)	4,534	14,943	0
Taxes					0	0
24	Federal Income Tax	(85)	(510)	1,469	4,827	0
25	State & Local Income Tax	(19)	(117)	336	1,114	0
26	**Net Operating Income (L23-L24-L25)**	(159)	(948)	2,729	9,002	0
Other					0	0
27	Nonoperating Income & Expense				0	0
28	Nonoperating Income Tax				0	0
29	Net Operating Earnings (L26-L27-L28)	(159)	(948)	2,729	9,002	0
30	Interest Expense				0	0
31	Juris Diff & Nonreg Net Income				0	0
32	Extraordinary Items				0	0
33	**Net Income (L29-L30-L31-L32)**	(159)	(948)	2,729	9,002	0

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Compensated Absence Dropoff
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(791)
Total Operating Income Taxes	315
Net Operating Income	476
Rate Base	0
Revenue Requirement	(800)

Accrual Accounting was adopted in accordance with SFAS 43 for compensated absences to amortize unaccrued absence on a straight line basis over a 10 year period beginning on January 1, 1988 and ending on December 31, 1997. This adjustment removes July through December 1997 amounts from the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Merit Award
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(398)
Total Operating Income Taxes	176
Net Operating Income	222
Rate Base	0
Revenue Requirement	(373)

Accrual accounting was adopted for merit awards to be amortized over a ten year period beginning on January 1, 1988 ending on December 31, 1997. This adjustment removes the July through December 1997 amounts from the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Medical Dental Accrual Dropoff
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(102)
Total Operating Income Taxes	30
Net Operating Income	72
Rate Base	0
Revenue Requirement	(121)

Accrual accounting was adopted for medical and dental expenses to be amortized over a ten year period beginning on January 1, 1988 ending on December 31, 1997. This adjustment removes the July through December 1997 amounts from the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Expense Limit Change
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	353
Total Operating Income Taxes	(140)
Net Operating Income	(213)
Rate Base	0
Revenue Requirement	358

FCC Order 78-196 authorized a change in capitalization rules, and a 10 year amortization for assets whose initial value was between $200 and $500. The amortization period ran from January 1988 through December 1997. This adjustment removes from the test period the final six months of expenses related to this order. FCC Order 95-60 authorized a change in capitalization rules for assets whose value was between $500 and $2000 effective January 1, 1998. This adjustment brings the test year to 1998 levels.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Remove Out of Period Revenue
Test Year Ending June 30, 1998
$(000)

Operating Revenues	(2,150)
Operating Expenses	(24)
Total Operating Income Taxes	(846)
Net Operating Income	(1,280)
Rate Base	0
Revenue Requirement	2,151

This adjustment removes out of period revenue from the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Directory Surcharge Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	(13,844)
Operating Expenses	(159)
Total Operating Income Taxes	(5,449)
Net Operating Income	(8,236)
Rate Base	0
Revenue Requirement	13,843

In Decision 60381, the Arizona Corporation Commission allowed US WEST to implement a surcharge to recover $34M plus interest related to a directory imputation. In US WEST's last rate case, this was found to be inappropriate by the Arizona Court of Appeals.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Telephone Assistance Plan Adjustment
Test Year Ending June 30, 1998
$(000)

Operating Revenues	(1,354)
Operating Expenses	(16)
Total Operating Income Taxes	(533)
Net Operating Income	(805)
Rate Base	0
Revenue Requirement	1,353

In February 1998 an amount was booked for the Telephone Assistance Program that relates to a prior period. This adjustment removes the out of period amount from the test year.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Out of Period Property & Other Taxes
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	1,515
Total Operating Income Taxes	(603)
Net Operating Income	(913)
Rate Base	0
Revenue Requirement	1,535

This adjustment removes out of period property and other taxes from the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Affiliated Interest True-Up
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	582
Total Operating Income Taxes	(232)
Net Operating Income	(350)
Rate Base	0
Revenue Requirement	588

This adjustment reflects billing true-ups for U S WEST affiliates that should have been recorded in the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
FICA & Savings Plan Contributions
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(670)
Total Operating Income Taxes	267
Net Operating Income	403
Rate Base	0
Revenue Requirement	(677)

The Company recorded payroll tax and savings plan contributions in February 1998 relating to the calendar year 1997 Annual Bonus Plan payout made in that month. This adjustment removes January through June 1997 amounts from the total and the test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Pension Plan Contributions
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	263
Total Operating Income Taxes	(104)
Net Operating Income	(159)
Rate Base	0
Revenue Requirement	267

The Company recorded pension plan true-ups in December 1997 related to the entire calendar year 1997. This adjustment removes January through June 1997 amounts from the total and test period.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Toll Revenue Billing True-Up
Test Year Ending June 30, 1998
$(000)

Operating Revenues	(1,593)
Operating Expenses	(18)
Total Operating Income Taxes	(627)
Net Operating Income	(948)
Rate Base	0
Revenue Requirement	1,593

This adjustment reflects a billing true-up for Toll Revenue booked in November 1998 that should have been recorded in the test year.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Test Year Ending June 30, 1998
Remove Test Period Year 2000 Costs
$(000)

Operating Revenues	0
Operating Expenses	(4,534)
Total Operating Income Taxes	1,805
Net Operating Income	2,729
Rate Base	0
Revenue Requirement	(4,587)

The Company has incurred software costs and costs to install additional computer hardware to meet the requirements of the Year 2000. This adjustment removes those costs from the test period because it will not be a recurring expense.

U S WEST
Arizona Intrastate Operations
Accounting Adjustment Not Included
Remove Test Period Accounting Adjustments
Test Year Ending June 30, 1998
$(000)

Operating Revenues	18,941
Operating Expenses	3,998
Total Operating Income Taxes	5,941
Net Operating Income	9,002
Rate Base	0
Revenue Requirement	(15,130)

This adjustment removes test period accounting adjustments not included as a result of the end of period annualization adjustment.

U S WEST
Arizona Intrastate Operations
Proforma Adjustments Not Included Summary
Test Year Ending June 30, 1998
$(000)

		Test Period Wage Increase	State Tax Rate Change	Remove Test Period Proforma Adjustments	Total
Revenues					
1	Local Service Revenues			-	-
2	Network Access Service Revenues			-	-
3	Long Distance Network Service Rev.			-	-
4	Miscellaneous			-	-
5	Total Oper. Rev. (L1 thru L4)	0	0	-	-
Expenses					
6	Maintenance	2,206		(2,206)	-
7	Engineering Expense	97		(97)	-
8	Network Operations	358		(358)	-
9	Network Administration	28		(28)	-
10	Access Expense			0	-
11	Other	44		(44)	-
12	Total Cost of Services & Products(L6 thru L11)	2,733	0	(2,733)	-
13	Customer Operations	1,555		(1,555)	-
14	Corporate Operations	652		(652)	-
15	Property & Other Taxes			0	-
16	Uncollectibles			0	-
17	Tot Selling, General & Admin.(L13 thru L16)	2,207	0	(2,207)	-
18	Other Operating Income & Expense			0	-
19	Depreciation Expense			0	-
20	Universal Service Fund			0	-
21	Link Up America			0	-
22	Total Operating Expense(L12+L17 thru L21)	4,940	0	(4,940)	-
23	Income From Operations (L5-L22)	(4,940)	0	4,940	-
Taxes					
24	Federal Income Tax	(1,601)	240	1,361	(0)
25	State & Local Income Tax	(366)	(679)	1,045	(0)
26	**Net Operating Income (L23-L24-L25)**	(2,973)	439	2,534	0
Other					-
27	Nonoperating Income & Expense			0	-
28	Nonoperating Income Tax			0	-
29	Net Operating Earnings (L26-L27-L28)	(2,973)	439	2,534	0
30	Interest Expense			0	-
31	Juris Diff & Nonreg Net Income			0	-
32	Extraordinary Items			0	-
33	**Net Income (L29-L30-L31-L32)**	(2,973)	439	2,534	0

U S WEST
Arizona Intrastate Operations
Proforma Adjustment Not Included
Test Period Wage Proforma
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	4,940
Total Operating Income Taxes	(1,967)
Net Operating Income	(2,973)
Rate Base	0
Revenue Requirement	4,997

On January 1, 1998 occupational employees received a wage and salary increase. On March 1, 1998 management employees received a wage and salary increase. This adjustment annualizes the impacts of those increases.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment Not Included
State Tax Rate Change
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(439)
Net Operating Income	439
Rate Base	0
Revenue Requirement	(738)

This adjustment reflects the state tax rate change from 9 percent to 8 percent effective January 1, 1998.

U S WEST
Arizona Intrastate Operations
Proforma Adjustment Not Included
Remove Test Period Proforma Adjustments
Test Year Ending June 30, 1998
$(000)

Operating Revenues	0
Operating Expenses	(4,940)
Total Operating Income Taxes	2,406
Net Operating Income	2,534
Rate Base	0
Revenue Requirement	(4,259)

This adjustment removes the test period proforma adjustments not included as a result of the end of period annualization adjustment.

RESULTS OF USWC PRODUCTIVITY STUDY
BASED ON ARIZONA INTRASTATE FINANCIAL DATA

	1988	1989	1990	1991	1992	1993
Annual Growth in Outputs (Revenues)	Base	3.4%	0.9%	-0.5%	1.8%	3.9%
Annual Growth in Inputs (Expenses)	Year	5.8%	-0.8%	5.9%	4.6%	3.4%
Annual Productivity	Data.	-2.4%	1.7%	-6.4%	-2.8%	0.5%

	1994	1995	1996	1997	1998
	7.3%	6.9%	8.6%	5.4%	3.5%
Annual Growth in Outputs (Revenues)	4.6%	2.5%	4.1%	1.1%	1.9%
Annual Growth in Inputs (Expenses)	2.7%	4.4%	4.5%	4.3%	1.6%
Annual Productivity					

Average Productivity from 1988 - 1998	0.80%

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATE MAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON, AND TO APPPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN.	)	**DOCKET NO.**

STATE OF WASHINGTON)
: ss AFFIDAVIT OF PETER C. CUMMINGS
COUNTY OF KING)

Peter C. Cummings, of lawful age being first duly sworn, depose and states:

1. My name is Peter C. Cummings. I am Director – Finance & Economic Analysis of U S WEST Communications in Seattle, Washington.

2. Attached hereto and made a part hereof for all purposes is my testimony consisting of pages 1 through 66, and my exhibits numbered PCC-1 Through PCC-13.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Peter C. Cummings

Peter C. Cummings

SUBSCRIBED AND SWORN to before me this 4th day of

December, 199~~8~~ Jan

Joyce A. Morris

Notary Public residing at
Everett Washington.

JOYCE A. MORRIS
COMMISSION EXPIRES
NOTARY
PUBLIC
APRIL 11, 2002
STATE OF WASHINGTON

My Commission Expires: April 11, 2002

PETER C. CUMMINGS

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

PETER C. CUMMINGS

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

I. TESTIMONY

COST OF EQUITY

REASONABLENESS TESTS

COST OF EQUITY AND RECOMMENDED RETURN

II. APPENDICES

III. EXHIBITS

EXECUTIVE SUMMARY

1. Current Responsibilities:

My name is Peter C. Cummings and my business address is 1600 Bell Plaza, Room 3005, Seattle, Washington 98191. I am employed by U S WEST Communications, Inc. (USWC) as Director - Finance and Economic Analysis.

My job responsibilities include financial analysis of capital costs and capital structure of U S WEST Communications. I develop cost of capital estimates for company cost studies, capital budgeting, and economic analysis. I also testify in state rate cases on rate of return, capital structure, and other financial issues.

2. Purpose of Testimony:

I am appearing before the Corporation Commission to present an analysis of the cost of capital and capital structure for U S WEST Communications, Inc. (USWC). The purpose of my testimony is to make a recommendation to the Commission for a fair rate of return on equity and total capital for USWC.

3. Summary of Testimony:

Risks Faced by USWC and the Telecommunications Industry

One can pick up practically any recent *Wall Street Journal* and somewhere in there will be at least one article discussing a merger, consolidation, new entrant or some other significant change in the telecommunications industry. The very nature of telecommunications, its changing technology and the ability to transmit ideas around the globe instantly means that change is both rapid and national, if not international in scope. Rapid change leads to uncertainty about future outcomes. In financial terms, this is risk. Arizona is one of the focal points for change in the local telecommunications industry.

Risk and Competition in Arizona

The local phone service market in Arizona is becoming very competitive. Sixty five companies either have or are seeking certification to provide local service. Cox Digital Telephone offers free installation and has priced a popular bundle of services at 28% below U S WEST's prices. As competitors target U S WEST's business and residence customers, the company's business risk increases significantly due to its capital intensity and high operating leverage.

Given the combination of high growth and competition in Arizona, I conclude that capital costs would be higher for Arizona by itself than for U S WEST combined. Given a range of capital cost estimates with the midpoint as the best estimate for U S WEST, I would estimate capital costs for Arizona near the top of the range.

Fair Return on Equity Capital

It is the actions of investors buying and selling securities in the market that determines the cost of capital. Thus, estimating the cost of equity capital requires data from the financial markets.

The cost of capital represents the return investors are expecting given the level of risk they are willing to accept.

I have analyzed market data for U S WEST along with two proxy groups of companies utilizing discounted cash flow (DCF) and capital asset pricing model (CAPM) methods to estimate the cost of equity capital for USWC. These estimates form the basis for my judgment that the cost of equity capital for USWC is in the range of 12.1% to 13.3%. A fair equity return for U S WEST on it's Arizona investment is equal to the cost of equity capital.

Capital Structure

USWC's Arizona capital structure relates the sources of investor financing to the assets used to provide telephone service in Arizona and should be utilized in determining the company's revenue requirement. The current capital structure is 41.2% debt and 58.8% equity. The embedded cost of debt financing for Arizona is 7.52%.

Conclusion

The conclusion of my testimony is that a fair return on the equity capital invested in Arizona is in the range of 12.1% to 13.3%, and my specific recommendation is that the Commission authorize a fair return on equity capital of 13.0%.

When combined with the Company's capital structure and debt costs, my overall return requirement recommendation is 10.74%.

IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT POSITION.

A. My name is Peter C. Cummings and my business address is 1600 Bell Plaza, Room 3005, Seattle, Washington 98191. I am employed by U S WEST Communications, Inc. (USWC) as Director - Finance and Economic Analysis.

Q. WHAT ARE YOUR JOB RESPONSIBILITIES?

A. My responsibilities include financial analysis of capital costs and capital structure of U S WEST Communications. I develop cost of capital estimates for company cost studies, capital budgeting, and economic analysis. I also testify in state rate cases on rate of return, capital structure, and other financial issues.

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.

A. I began my career at Northwestern Bell in 1969 and have held positions in Operator Services, Marketing, and Finance departments. For the last fourteen years, my job responsibilities have been focused on cost of capital and rate of return.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND OTHER QUALIFICATIONS.

A. I received my B.A. degree from Bemidji State College in Minnesota. I have a Master of Public Administration Degree from the University of Oklahoma and a Master of Business Administration Degree from Creighton University in Omaha, Nebraska. I am a Chartered Financial Analyst (CFA) and a member of the Association for Investment Management and Research (AIMR), the Financial Management Association (FMA), and the Seattle Society of Financial Analysts.

Q. IN WHAT REGULATORY PROCEEDINGS HAVE YOU TESTIFIED?

A. I have filed testimony in a number of jurisdictions and dockets as shown in Appendix I.

PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present U S WEST Communications' cost of capital and regulatory capital structure and recommend a fair rate of return on equity and capital for USWC's Arizona jurisdiction.

CAPITAL MARKETS

Cost of Capital Defined

Q. WHAT IS THE COST OF CAPITAL?

A. The **cost of capital** is the expected rate of return that the capital markets require in order to attract funds to a particular investment. In economic terms, the cost of capital is an *opportunity cost* – that is, the cost of foregoing the next best alternative investment. The cost of capital is always an *expected return.* There are several key points embedded in this definition:

1. The cost of capital is a rate of return **expected by investors.** For debt capital, which has precise terms and conditions, the expected return can be directly observed in the yield provided by the bond or debt security. For equity capital, the expected return cannot be directly observed and must be estimated indirectly. The risk of ownership, which comes with equity investment, is sometimes called the "residual risk" which means that only after all other creditors have been paid do equity owners receive a return. That is why the return expected by equity investors is significantly greater than the return expected by debt investors.

2. The cost of capital is determined in **capital markets** (e.g., the New York Stock Exchange) and data from capital markets is essential for estimating the cost of capital.

3. The cost of capital depends upon the return offered by **alternative investments of equivalent risk.** Consideration of these investment alternatives and risks are part of the evidence that needs to be examined.

The cost of capital is an opportunity cost, which is determined in the capital markets, and depends upon the risk of the investment.

Sometimes, the terms **market required return** and **cost of capital** are used interchangeably. This is not technically correct because the cost of financing is greater to the company than it is to the investor because of costs the company pays to issue stock or bonds. Because of issuance costs, the company receives less money than the investor provides. This is equally true for both debt and equity securities. In my testimony on the cost of equity, market required return refers to the return required or expected by equity investors and cost of equity refers to the cost for the company to provide that return.

Q. WHY IS THE COST OF CAPITAL IMPORTANT?

A. The cost of capital has a crucial role in guiding the investment decisions of all companies. To conduct business, companies have real assets, such as machinery, equipment, distribution networks, computers, vehicles and buildings. All of these operating assets need to be financed. Companies sell financial assets or securities such as stocks, bonds, leases, bank loans, etc. to fund operational assets. The risk associated with a company's business is reflected in the return it must provide to holders of its financial assets.

Fair Return Concepts

Q. PLEASE EXPLAIN THE CONCEPT OF A FAIR RATE OF RETURN.

A. For a company with operations subject to regulation, the actions of regulatory authorities responsible for setting prices to be charged for services provided by the company are intended to substitute for the actions and effects of a fully competitive market. In order to set the prices to be charged, the regulators must take into account the concept of a "fair return" to investors supplying capital to the regulated company:

> The concern with a "fair" return to investors must balance two needs: customers should not be overcharged for the capital investors supply, and investors must be paid enough to assure that the requisite capital will be available to meet customers' needs in the future.
>
> (A. Lawrence Kolbe, James A. Read, Jr. and George R. Hall, The Cost of Capital Boston: Charles River Associates, 1984, p. 2.)

Q. HOW DOES THE CONCEPT OF A FAIR RATE OF RETURN INVOLVE A BALANCE BETWEEN NEEDS OF INVESTORS AND CUSTOMERS?

A. Investors provide capital with the expectation of receiving a return on their investment, commensurate with risks involved. Investors make and continue holding only those investments which are expected to provide returns that meet or exceed their required returns. In order to attract capital, companies must provide investors with returns equal to or exceeding their required return. The return that must be provided to investors supplying capital is an important cost of doing business. At the same time, customers want services that meet their needs at prices they are willing to pay. Companies must raise capital to finance the plant and equipment used to provide services to customers. Regulated companies are dependent on regulators to set an allowed rate of return which is reflected in the prices they may charge for services provided to customers. The allowed rate of return is not a guaranteed return, it is simply an opportunity to earn that amount. A regulated company may actually earn more or less than the allowed return depending upon the demand for its services and the efficiency of its operations. In addition, regulatory imputations and disallowances can affect a company's ability to achieve the investors' expected return.

Q. WHAT IS THE LEGAL BASIS FOR A FAIR RETURN?

A. The foundation for determining a fair return for regulated companies was clearly established by the U. S. Supreme Court in Federal Power Commission v. Hope Natural Gas Company 320 U.S. 591 (1944) and Bluefield Water Works & Improvement Co. v. Public Service Commission of the State of West Virginia, 262 U.S. 679 (1923).

These court decisions provide two standards for a fair and reasonable return:

1. The ability or opportunity to earn returns commensurate with those of other firms having **corresponding risks**.

2. The allowed return should be sufficient to assure confidence in the financial integrity of the company in order to **maintain and support creditworthiness** and the ability to **attract capital** on reasonable terms.

Q. WHAT IS THE RELATIONSHIP BETWEEN A FAIR RETURN AND THE COST OF CAPITAL?

A. A fair return allowed by the regulatory body will allow the regulated company the opportunity to earn a return on its assets equal to its weighted cost of equity and debt capital.

Market Focus

Q. HOW CAN A FAIR RETURN BE ESTABLISHED?

A. The concepts of a fair return and legal interpretations of what constitutes a fair and reasonable return for regulated companies point to the capital markets as the focus for determining a fair return. A fair return depends upon the risk of the firm, comparable investments in other firms, and creditworthiness and economic conditions. Financial and economic theory tells us that a fair return for a company is equal to the market required return for the company's securities plus the costs of issuing those securities. Where all of these factors come together is in the capital markets.

The focus of any cost of capital analysis must be on the marketplace and the actions of investors. Publicly held companies, both regulated and unregulated, compete for investors' capital. Today's capital markets provide a myriad of investment alternatives to the investor, including government securities, stocks, bonds, real estate, precious metals, mutual funds, derivative securities, and others. The markets are dynamic and the returns required for security investments change according to financial and economic conditions.

RISK

Investment Risk

Q. WHAT IS RISK?

A. Risk is uncertainty about a future outcome or event. In the investment context, risk is uncertainty about the expected rate of return. Risk and expected returns are related. The higher the risk, the higher the expected return:

> Risk is thought of as uncertainty regarding the expected rate of return from an investment.

> While there is a difference in the specific definitions of risk and uncertainty, for our purposes and in most financial literature the two terms are used interchangeably. In fact, one way to define risk is as the uncertainty of future outcomes. An alternative definition might be as the probability of an adverse outcome.
>
> (Frank K. Reilly, Investment Analysis and Portfolio Management, 3rd Ed; New York: Dryden Press, 1989, pp. 6-7 and p. 256.)

Investors typically segment the total risk into business risk and financial risk. Business risk is uncertainty in operating sales, cash flow, and earnings and is related to the industry, the overall economy, and to the company itself:

> Business risk (BR) is the uncertainty due to a firm's sales volatility, which is generally related to the characteristics of the firm's industry. In addition, the variability of the firm's operating earnings is affected by the firm's production function (i.e., the mix of fixed and variable costs), which is indicated by its operating leverage.
>
> (Frank K. Reilly, Investment Analysis and Portfolio Management, 2nd Ed; New York: Dryden Press, 1985, p. 287.)

Financial risk is additional risk or uncertainty to the investor caused by debt financing of the company or the investment. Financial risk increases as the amount of fixed debt financing or leverage increases. The more debt in a company's capital structure, the greater the financial risk.

Q. WHAT ARE THE BUSINESS RISKS FACING USWC?

A. As part of the telecommunications industry, USWC faces the risks of facilities based and resale competition by other local exchange and interexchange carriers, loss of market share to new technologies such as wireless (both mobile and fixed), Internet, and cable TV telephony, technological obsolescence of its operating plant, economic risks such as inflation and recession, and regulatory risk. Regulatory risks for local exchange carriers are very significant due to the complexity and magnitude of public policy issues which must be solved, especially with the added complexity of implementing the Telecommunications Act of 1996.

Competition and Industry Risks

Q. IS COMPETITION A SIGNIFICANT BUSINESS RISK FOR USWC?

A. Yes. The local exchange business is exposed to significant competition. Investment analysts are highlighting this risk in their reports to investors. For example:

> So far, 1998 has continued to be a pivotal and tumultuous time for the telecom industry as companies address the changing regulatory, technological, and operational landscape. We continue to see telecom players set their offensive and defensive positions, bracing for new opportunities and risks in an atmosphere characterized by increasing competition, deregulation, and technological advancements. The most recent precedent setting deal was the announced merger of SBC and Ameritech, which we believe will create a telecommunications powerhouse and is likely to heighten the industry's sense of urgency to gain scale and a national market presence. We expect the consolidation trend to continue throughout 1998 as companies attempt to protect market share while expanding into new markets. Consolidation strategies allow them to address full-service provisioning, improve scale economies, and prepare for increased competition. In addition, we believe a plethora of key regulatory decisions and reconsiderations would dramatically change the face of the telecommunications industry.
>
> (UBS Global Research, Telecommunications Services, Summer 1998, page 20)
>
> While current RBOC trends remain strong, business focused CLECs will join with residentially driven cable companies (led by AT&T) to slow the RBOCs growth materially by 2000. ...
>
> Risks abound. Downside risk to the telcos through worse competitive pressures – e.g., 10 points or more customer share losses in 1999; or simply more severe pricing – could shave 5-7% from Ameritech, 10% from U S WEST and 6-8% from Sprint.
>
> (Bernstein Research, "AT&T - TCI in Perspective", June 30,1998.)

Q. CAN YOU PROVIDE SPECIFIC EXAMPLES OF HOW LOCAL EXCHANGE COMPETITION IS BEING IMPLEMENTED?

A. Yes. Cox Communications has told investors that Cox is positioned to capitalize on strong consumer demand for communications services and to fulfill the promise of competition envisioned in the Telecommunications Act of 1996:

> Cox's residential telephone service was launched in Orange County on September 10 and in Omaha on December 1. In Orange County it was launched initially to an area with 1500 homes and now is available to 19,200 homes. Of those, Cox has marketed the service to 16,900 homes. The penetration of the service is about 5% of total homes to which the service is available and 6% of marketed homes. In the first area where Cox Digital Telephone was debuted penetration is 17%.
>
> Cox is providing second lines at 50% less than Pacific Bell's Orange County price, according to executives. Cox has received regulatory approval to deliver phone service in nine markets nationwide, and has installed telephone switching equipment in seven of those. The service is expected to be launched in three more markets: San Diego, Hartford, and Phoenix in 1998.
>
> ("Cox says early foray's bearing fruit", America's Network, June 1, 1998.)

Cox is now offering local telephone service in Chandler and has approval to serve Phoenix:

> On Wednesday, the Phoenix City Council approved issuing a license to Cox to offer residents in that city local telephone service, ending U S WEST's monopoly.
>
> Cox plans to begin offering phone service plus digital TV and Internet access to Phoenix residents around the middle of next year.
>
> Cox has been offering telephone service to residents in southwest Chandler since Oct 1. By the end of the year about 40,000 households should have the service available in Chandler.
>
> (The Tribune Newspaper, Mesa Arizona, November 20, 1998, pp. B1 & B2.)

AT&T, the nation's largest long-distance company, is merging with TCI, the biggest cable company, to provide voice telephony, data services, internet access and television all over one wire on the same bill:

> TV and telephone over the same wire. Digital video, high speed internet access and electronic commerce. All under one brand name, all on one bill.
>
> In deciding to merge their companies, AT&T and Tele Communications Inc. foresee a future rich with opportunity – and with competition like a Wild West shootout.
>
> If I were a telco (telephone company), I'd be pretty scared about this," said Mark Siegel, AT&T's chief spokesman for consumer matters. "This will offer people a true alternative" to the local phone company.
>
> ("TCI, AT&T deal may spur phone company shootout", Seattle Post Intelligencer, July 2, 1998.)

Q. IS THE RISK FROM COMPETITION LIKELY TO BE LIMITED TO OPERATIONS IN LARGE URBAN AREAS OR ARE THE RURAL AREAS ALSO AT RISK?

A. Local exchange competition is affecting the cities first because the concentration of customers makes the cities an attractive market. As wireless technology develops and as cable television operators upgrade their systems to provide telephony, local exchange competition will affect the rural areas as well as the big cities.

Q. HOW WILL THIS COMPETITION AFFECT REVENUES AND PROFITABILITY?

A. U S WEST's profitability is at substantial risk. A recent Business Week report discusses the impact of customer losses for U S WEST:

> U S WEST could lose 20% to 40% of its core local phone business in the next five years as competition from new rivals grows, executives admit. Its entry into long distance could be delayed for a year or more because of regulatory challenges from AT&T and others. And if its bold new ventures fall flat, its best customers may leave for cable companies and others that plan to bundle phone service. "If we lose the 25% of our customers that give us 75% of our profits, we have a survival issue," admits Richard D. McCormick, who is CEO of the combined U S WEST and will become chairman of the new phone company.
>
> ("U S WEST Scouts a New Frontier", Business Week, May 18, 1998.)

Q. HOW DOES THE INCREASED BUSINESS RISK FROM COMPETITION AFFECT THE EQUITY VALUATION OF COMPANIES LIKE USWC?

A. The increasing business risk and uncertainty associated with local exchange competition is transforming the investment characteristics of USWC and other local exchange companies from a lower risk, utility like investment to a higher risk, growth stock or industrial company like investment. This trend has been apparent to investment analysts for some time:

> Around the world, the demand for capital is growing as companies invest heavily in telecommunications infrastructure. In the United States, the competition arising from deregulation is spurring rapid growth in telecommunications services and a proliferation of public offerings. Furthermore, stocks that once traded like utilities are exhibiting the characteristics of growth stocks.
>
> (Industry Analysis: The Telecommunications Industry, Charlottesville VA: Association for Investment Management and Research, 1994.)

> The conceptual rationale for assigning close-to-market multiples on traditional, regulated businesses -- which historically have sold at greater discounts to the market -- is the longer term potential of the companies to move away from rate-of-return regulation and expand the breadth of services delivered through the telephone network. There is major concern among investors about the outlook for telephone earnings because of increased competition.

(Charles W. Schelke, CFA and Carl H. Blake, CFA, "Telecommunications Service Companies - Outlook", Smith Barney Shearson, May 9, 1994.)

Risk and Competition in Arizona

Q. HOW COMPETITIVE IS THE LOCAL PHONE SERVICE MARKET IN ARIZONA?

A. Looking at the numbers of competing companies involved, the Arizona market is very competitive. Reflecting the population growth boom in Arizona, AT&T, Cox, ELI, GST, ACSI and others are investing in facilities and 45 CLECs have interconnection and resale agreements with U S WEST to provide local telephone service.

The Arizona Corporation Commission has certified 18 ILECs and 16 CLECs. In addition, 49 telecommunications companies are awaiting approval – that's 65 companies with or seeking certification to provide local service. For long distance, there are about 100 companies currently providing long distance services in Arizona. My point is that the level of competition involved with 100 companies providing (what are undeniably competitive) long distance services is very similar to 65 companies providing local exchange services.

Q. MOST OF THE COMPETITION SEEMS TO BE OCCURRING IN AND AROUND PHOENIX AND TUCSON. WHAT ARE THE IMPLICATIONS OF THIS CONCENTRATION FOR THE STATE OF ARIZONA?

A. Competition in Phoenix and Tucson means competition for Arizona. 85% of USWC's access lines in Arizona are in Maricopa County or Pima county. These are also the counties where population growth and growth in demand for telephone services is occurring.

Q. IS THERE MEANINGFUL COMPETITION FOR RESIDENTIAL SUBSCRIBERS IN ARIZONA?

A. Yes. A good example is Cox Communications. Buoyed by its successes in California, where Cox Digital Telephone was debuted and achieved penetration of 17%, Cox is expanding to Phoenix and other markets. Cox plans to have 8 master telecommunications centers in the metropolitan area and is aggressively marketing residential services.

Q. HOW COMPETITIVE IS COX?

A. Very competitive. Cox offers free installation and has priced its most popular bundle of services at 28% below U S WEST prices. For example, the first line costs $11.75 from Cox; $13.43 from U S WEST. Second lines from Cox are less than half the cost from U S WEST -- $6.50 vs. $13.43. Voice mail is $2.00 less from Cox and Call Waiting and Caller I.D. are $1.00 less.

Q. WHAT IS THE IMPACT OF COMPETITION ON USWC'S COST OF CAPITAL?

A. USWC's local exchange operations are capital intensive and have high operating leverage. What this means is that the company has a high level of fixed costs and even small losses in revenues are magnified into larger impacts on bottom line profitability. Competitive entrants are targeting high revenue/high profit margin customer accounts. As these customers leave U S WEST's network and low or negative profit margin customers are retained, profit margins shrink dramatically and business risk increases significantly. Likewise, sales volatility leads to a larger corresponding volatility in profit margins. The impacts of competition thus magnify business risks for USWC and increase the company's cost of capital.

Q. GIVEN THE COMBINATION OF GROWTH DEMAND AND COMPETITION IN ARIZONA, IS IT REASONABLE TO CONCLUDE THAT CAPITAL COSTS WOULD BE HIGHER FOR ARIZONA BY ITSELF THAN FOR U S WEST COMBINED?

A. Yes, I believe that's a reasonable conclusion. U S WEST raises capital on a consolidated basis for investment to provide services in all of the 14 states served by the company. The diversification of investment, operations, and regulation among 14 states provides a lower risk exposure to investors and thus a lower cost of capital. The high growth and competition level in Arizona makes the state riskier than other U S WEST states. Other factors pointing to the conclusion of higher capital costs for USWC-Arizona are low bond ratings for the state's electric utilities and investor perception of higher relative regulatory risk associated with ownership of securities in the jurisdiction's electric, gas, and telephone utilities.

Q. CAN YOU QUANTIFY THE DIFFERENCE IN CAPITAL COSTS BETWEEN U S WEST AS A WHOLE AND THE ARIZONA JURISDICTION?

A. Given the factors discussed above, it's my judgement that capital costs for Arizona are moderately higher than for U S WEST as a whole, but not out of the range of estimates for U S WEST. Given a range of capital cost estimates and selecting the midpoint as the best estimate for U S WEST, I would estimate the capital costs for Arizona at or near the top of the range.

The Telecommunications Act of 1996

Q. BRIEFLY, WHAT IS THE TELECOMMUNICATIONS ACT OF 1996 AND HOW IS IT BEING IMPLEMENTED?

A. The Telecommunications Act, signed February 8, 1996, replaced the Consent Decree which guided the 1984 Bell System Divestiture. It provides a broad framework for opening the local phone market for increased competition and allowing local phone companies to provide interLATA long distance. The FCC was given the responsibility of developing implementation rules. Its principal tasks are to determine fair interconnection rates for long distance carriers to purchase access to local markets through local exchange companies' networks, to devise and implement conditions for local exchange carrier entry into long distance markets, and to provide for universal service funding.

Q. HAS THE TELECOM ACT AFFECTED THE RISKS FOR LOCAL EXCHANGE CARRIERS?

A. Yes. Risks are greater now, both because of the increased competition and because of the uncertainty surrounding regulatory actions to implement the Telecom Act. The following quotes are representative of investment analyst reactions to the 1996 Telecom Act:

> As the Bell holding companies begin to take advantage of the liberties that the [Telecom] law provides, we believe that the risks associated with this legislation may have a greater impact on ratings than the opportunities to compete in new lines of business, or to share in new sources of revenue. The principal threat that may develop will be to the financial performance of their largest subsidiaries, the telephone operating companies, with the opening of the local loop to alternative carriers.
>
> (Moody's Investors Service, <u>U.S. Telephone Industry – An Update,</u> December 1996.)

> The chief driver of local company risk lies in the notion that competitors will be offered access to the local networks to serve local customers at extremely favorable prices.

> This phenomenon, which has no parallel in the telecom world anywhere outside the U.S., is an outgrowth of the 1996 Telecom Act's call for "network unbundling", which allows for the piece-part usage of the local network. Seemingly innocuous, unbundling has, with two important additions, taken on the face of a LEC-slayer. The initial blow was the FCC's introduction of Total Element Long-Run Incremental Cost (TELRIC), in essence a way of pricing the unbundled elements at best-technology, forward-looking, incremental cost. The other blow was landed by the long distance companies, who realized that they could piece together the entire local network on an unbundled basis, swapping the puny 20% average "resale" discount with far higher discounts for an identical service, but under the unbundled TELRIC tariff. Compared with the resale discount of about 20%, the "rebundled" version of the network is expected to produce for average customers, about a 30% discount to the retail price for consumer offerings, and about a 50% discount on business customers. To make matters worse, the higher the customer's value (i.e. more long distance, more toll, more vertical services), the higher the discount, with 70% in no way unattainable.
>
> By 2001 we expect the LECs to lose retail control of about 15% of residential lines and perhaps 30% of business lines.
>
> (Bernstein Research, Telecom Returns Get Going (...Going...Gone), June 13, 1997)

Regulatory Risk

Q. WHAT IS REGULATORY RISK?

A. For regulated companies, regulatory risk is a major component of business risk. This is because regulators can have a significant impact on regulated companies' operations and financial results.

Regulatory risk generally refers to the quality and consistency of regulation, and the effect of regulation on a regulated company's ability to generate revenues, manage expenses, and earn a return on capital investment.

Q. DOES COMPETITION CREATE MORE OPPORTUNITIES FOR REGULATORY RISK TO OCCUR?

A. Definitely. Here are some ways additional risk can occur when the incumbent company is regulated and the competitor is not:

- Requiring the regulated company to sell products or services to its competition below actual cost. This would cause the regulated company to incur a loss on each sale and thereby accelerate a loss of market share by setting competitors' costs artificially low.

- Allowing less than economic rates for depreciation, when compared to competitors. In Arizona, the same depreciation lives have been in effect since 1991.

- Requiring the regulated company to sell products or services to its retail customers at artificially high levels, thus creating artificial market opportunities for competitors through uneconomic pricing.

CREDIT RATINGS

Q. WHAT IS USWC'S CURRENT CREDIT RATING?

A. USWC is currently rated A+ by Standard & Poor's, A2 by Moody's, and AA- by Duff & Phelps.

Q. HOW DO THESE RATINGS COMPARE TO USWC'S PEER GROUP OF OTHER LOCAL EXCHANGE CARRIER TELEPHONE COMPANIES?

A. Compared to other RHC's telephone operations, USWC's ratings are on average, slightly lower.

CAPITAL STRUCTURE

Analysis of Capital Structure

Q. WHY IS CAPITAL STRUCTURE AN IMPORTANT ISSUE?

A. Capital structure is important because it is a key determinant of the total risk inherent in the firm.

Investors in a firm are exposed to both business risk and financial risk. Business risk comes from the risks of the overall economy and the industry in which the firm operates, the firm's position within the industry, competition, government regulation, etc. Financial risk is introduced by financial leverage as reflected in the mix of equity and debt financing and the cost to service debt.

Capital structure is comprised of equity (owners' capital), and debt (borrowed capital). Debt capital in the form of bonds and notes is obtained with a contract stating that interest will be paid in fixed amounts on fixed dates and that the principal will be paid back to the investor at a stated maturity date in the future. The payments to debt investors are constant. In good times and bad, the bondholders must be paid first. The return to equity investors varies with the firm's profitability and comes only after bondholders have been paid.

As debt obligations increase, more of the company's revenues are committed to repay fixed interest costs. This reduces the safety margin, or interest coverage, and increases the risk exposure to both debt and equity investors. As risks faced by investors increase, both require a higher return on their investment -- bondholders require a higher coupon rate and stockholders require a greater expected return. As the debt ratio increases, the interest rate required by bondholders increases and the equity investors bid down the price of the stock to increase the market required rate of return.

Q. WHAT CAPITAL STRUCTURE SHOULD BE USED IN SETTING RATES?

A. The financially and economically correct method for estimating a company's overall cost of capital uses market value weights for debt and equity, but book value capital structure weights have been traditionally used in ratemaking for practical and procedural reasons. Book value capital structure data specified by FCC prescribed accounting procedures and reported in annual "Form M" reports and company "Monthly Reports" (MR) is the best book value data available for purposes of computing capital structure weights for rate base, rate of return regulation.

The Company's actual book value capital structure, specifically that which reflects the equity and debt financing used to provide telephone service in Arizona should be used in setting rates. The proposed structure is the capital allocated to Arizona which consists of the embedded Mountain Bell capital in existence before the USWC telephone companies merger on 1/1/91 and post-merger financing allocated to Arizona.

Q. DO THE ACCOUNTING CHANGES FOR RETIREE MEDICAL BENEFITS (SFAS 106) AND DISCONTINUANCE OF SFAS 71 AFFECT THE REPORTED CAPITAL STRUCTURE OF USWC AND OTHER TELEPHONE COMPANIES?

A. Yes, and because telephone companies vary in their adoption of these accounting changes for financial reporting purposes, it is important that any capital structure comparisons between companies be made on the FCC regulated accounting basis.

As Duff & Phelps explains, accounting changes can distort capital structure ratios:

> Accounting conventions can be arbitrary and often cause balance sheet data to diverge from economic reality. The distortion usually results from an accounting charge that significantly reduces the book value of equity. The lower balance sheet equity values, in turn, distort book value leverage ratios and create interpretation problems.
>
> (Duff & Phelps, "Special Report: Measuring Debt With Cash Flow", July 1994, p 1.)

The accounting change from, "pay as you go" treatment of post employment benefits to accrual accounting required by SFAS 106 results in a large charge against current net income and a resulting large decrease in retained earnings. For financial reporting, companies have the option of taking this charge in the current year or spreading the charge over up to 20 years. Duff & Phelps explains how this accounting change impacts financial statements:

> The mandatory adoption of SFAS No. 106 specifies new requirements for recognizing the expense for post-retirement employee benefits other than pensions. Prior to SFAS No. 106, most corporations recognized the costs for post retirement benefits only when paid (the pay-as-you-go method). The new accounting standard requires firms to recognize the costs of these benefits during the periods in which they are earned by the employee. Companies have an option of recognizing the transition obligation, or catching up for prior periods, in one of two ways. They can recognize it as a one-time charge to current earnings and equity. Alternatively, they can defer the adverse impact on current earnings by recognizing it as a liability on the balance sheet to be amortized over as much as 20 years. At this time, there is no tax incentive to fund this obligation. Companies will continue to make cash outlays for these benefits on a "pay-as-you-go" basis. Therefore, a firm's cash flows are unaffected by the adoption of SFAS 106. Nonetheless, the financial statements are severely impacted, and the application of the accounting standard is inconsistent across companies.

> (Duff & Phelps, "Special Report: Measuring Debt With Cash Flow", July 1994, p 1.)

For telephone accounting, the FCC has directed the companies to amortize the charge over a period of up to 20 years.

U S WEST's decision to discontinue accounting for operations of U S WEST Communications in accordance with Statement of Financial Accounting Standards (SFAS) No. 71 resulted in a large, extraordinary, non-cash charge against equity [retained earnings] for financial reporting, but did not affect the FCC mandated accounting for telephone companies. All of the other RHC and large local exchange carrier companies have also discontinued accounting under SFAS 71. In a rating commentary explaining why SFAS 71 writedowns won't harm credit quality, Duff & Phelps discusses the legitimacy of separate financial statements for regulatory and financial purposes:

> Most regulatory bodies recognize the legitimacy of separate financial statements for regulatory purposes versus financial reporting purposes. For example, when several telephone companies took substantial write-offs related to the adoption of FAS 106 (accounting for post retirement benefit obligations), state regulators allowed them to maintain a different set of accounts for regulatory purposes.
>
> (Duff & Phelps, "Bell Writedowns Won't Harm Credit Quality", Credit Decisions, September 5, 1994.)

The source for data shown in Exhibit PCC-2 is the Form M reports (and associated data bases) filed with the FCC, and thus the capital structure comparisons are consistent for all the telephone operating companies. Form M capital structure data is consistent with FCC mandated accounting, is the best book value alternative to the financially correct method of using market value capital structure weights, and is consistent with the regulatory treatment advocated for post-employment benefits and the SFAS 71 discontinuance.

Q. HOW DOES USWC'S CAPITAL STRUCTURE COMPARE WITH THE CAPITAL STRUCTURES OF OTHER OPERATING TELEPHONE COMPANIES?

A. I have prepared Exhibit PCC-2, which shows telephone operating companies' debt ratios as reported to the FCC. As of year end 1997, the total capitalization of all the operating companies has a debt ratio of 43.6%; for 1996, the companies had a debt ratio of 42.5%.

The Arizona actual capital structure, which I recommend in this case, has a 41.2% debt ratio.

Capital Structure Recommendation

Q. PLEASE EXPLAIN HOW YOU COMPUTED THE ACTUAL CAPITAL STRUCTURE WHICH YOU ARE RECOMMENDING IN THIS CASE.

A. The capital structure I am recommending (see Exhibit PCC-3) is the capital structure for Arizona which is a combination of pre-merger and post-merger financing for the state's assets.

Q. WHY IS THERE AN ARIZONA SPECIFIC CAPITAL STRUCTURE?

A. The allocation of pre- and post -merger debt fairly and accurately represents the financing of the rate base serving Arizona customers. The reason for an allocated capital structure is to eliminate any revenue requirement shifts among state jurisdictions as a result of the 1991 merger of USWC's telephone operating companies.

The appropriate capital structure for setting revenue requirements in Arizona is the U S WEST Communications capital structure for Arizona.

COST OF DEBT

Q. HOW IS THE EMBEDDED COST OF DEBT DETERMINED?

A. The embedded cost of debt is the weighted average of all of the interest rates related to debt outstanding divided by the book balance of debt outstanding. The cost of debt also includes amortization of discounts, premiums, and issuance expenses. Just as depreciation expense recovers the cost of an asset over its life, this amortization expense recovers the costs associated with a bond over the term of the bond.

Q. WHAT IS THE EMBEDDED COST OF DEBT FOR ARIZONA?

A. The embedded cost of debt includes long term debt and short term borrowings. The blended Arizona embedded cost of debt based on pre-merger and post-merger financing is 7.52%.

COST OF EQUITY

The Market Required Return on Equity

Q. WHAT IS THE MARKET REQUIRED RATE OF RETURN ON EQUITY?

A. The market required return is the return demanded by equity investors. These investors set the price for equity capital through their actions in the marketplace. Investors set return requirements according to their perception of risk inherent in the enterprise, recognizing opportunity costs of foregone investments in other enterprises, and returns available from other investments of comparable risk.

The huge numbers of both investors and investment opportunities coupled with the ability to transmit and receive information almost instantaneously worldwide creates very liquid and very efficient capital markets. The actions of investors buying and selling securities in the capital markets determines the market required return on equity capital.

Q. CAN THE MARKET REQUIRED RETURN ON EQUITY BE DETERMINED PRECISELY?

A. No. In contrast to debt capital which carries precise terms and conditions and thus has precise measurements of the market required return, equity capital bears the corporation's residual risk and lacks those precise terms and conditions. The market required return for equity capital must be estimated from financial market information and the application of financial models.

Estimating the Market Required Return

Q. PLEASE EXPLAIN YOUR APPROACH TO ESTIMATING USWC'S MARKET REQUIRED RETURN ON EQUITY CAPITAL.

A. My estimation of market required return on equity utilizes Discounted Cash Flow (DCF) and Capital Asset Pricing Model (CAPM) methodologies applied to U S WEST and two proxy groups of companies.

The company groups chosen as proxies for USWC are publicly traded companies with operations in the local exchange telephone services industry, and a group of companies with risks comparable to USWC.

I believe that relying upon data for a single company or a single method to estimate the market required return weakens the reliability of the estimate. All estimation processes involve error, and the objective of making the best possible estimate is to minimize the error -- that is, to have the greatest confidence that the estimate is both valid and reliable. Using the industry peer group and a group of comparable risk companies in the analysis minimizes the potential for estimation error. Professors Brealey and Myers recommend this approach in their corporate finance text:

> Any estimate of *r* [cost of equity] for a single common stock is noisy and subject to error. Good practice does not put too much weight on single-company cost-of-equity estimates. It collects samples of similar companies, estimates *r* for each, and takes an average. The average gives a more reliable benchmark for decision making. ... We have stressed the difficulty of estimating *r* by analysis of one stock only. Try to use a large sample of equivalent risk securities. Even that may not work, but at least it gives the analyst a fighting chance, because the inevitable errors in estimating *r* for a single security tend to balance out across a broad sample.
>
> (Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, 5th Ed., New York: McGraw Hill, 1996, pp. 64-66.)

Ross, Westerfield, and Jaffe in another widely used text suggest an industry focus to estimate the cost of equity:

> [S]ome financial economists generally argue that the estimation error for *r* [the cost of equity] for a single security is too large to be practical. Therefore, they suggest calculating the average *r* for an entire industry. This *r* would then be used to discount the dividends of a particular stock in the same industry.
>
> (Stephen A. Ross, Randolph W. Westerfield, and Jeffrey F. Jaffe, Corporate Finance, 2nd Ed., Homewood, IL: Richard D. Irwin, Inc., 1990, p. 123.)

Estimating the market required return requires expert and informed judgment and that judgment is best based upon broader market evidence because of the potential for error or bias in limiting the analysis to just one company.

Q. WHY DO YOU USE MORE THAN ONE APPROACH FOR ESTIMATING THE MARKET REQUIRED RATE OF RETURN?

A. Each of the methods employed provides useful information on the market required rate of return. For example, the DCF methodology uses the current market price and expected dividends. The CAPM method incorporates current interest rates and provides a measure of risk. Analysis of comparable companies provides direct evidence on market required returns for comparable risk firms -- firms that USWC must compete with to obtain investor financing. Using multiple methods also provides a cross check on the market required return estimate. Results obtained from each method should define a useful range of return estimates to which judgment is applied.

Q. COULDN'T AN ANALYST SIMPLY USE THE DCF MODEL AND APPLY IT TO U S WEST TO OBTAIN USWC'S MARKET REQUIRED RETURN?

There is no single model that conclusively estimates the market required return for an individual firm.

> Use more than one model when you can. Because estimating the opportunity cost of capital is difficult, only a fool throws away useful information. That means you should not use any one model or measure mechanically and exclusively. Beta is helpful as one tool in a kit, to be used in parallel with DCF models or other techniques for interpreting capital market data.
>
> (Stewart C. Myers, "On the Use of Modern Portfolio Theory in Public Utility Rate Cases": Comment, Financial Management, Autumn 1978, p. 67.)

Other financial experts share similar conclusions:

> In practical work, it is often best to use all three methods - CAPM, bond yield plus risk premium, and DCF - and then apply judgment when the methods produce different results. People experienced in estimating capital costs recognize that both careful analysis and some very fine judgments are required. It would be nice to pretend that these judgments are unnecessary and to specify an easy, precise way of determining the exact cost of equity capital. Unfortunately, this is not possible.
>
> (Eugene F. Brigham and Louis C. Gapenski, Financial Management Theory and Practice, 4th Ed., Chicago: The Dryden Press, 1985, p. 256.)

> We have focused on using the capital asset pricing model to estimate the expected return on common stock. But it would be useful to get a check on this figure. We have already mentioned one possibility, the constant-growth DCF formula. You could also use DCF models with varying future growth rates, or perhaps arbitrage pricing theory (APT)
>
> (Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, 5th Ed., New York: McGraw-Hill, 1996, p. 218.)

I use multiple methods and capital market data for USWC and groups of companies to estimate a range of market required rates of return which forms the basis for my recommendation. This recommendation is subjected to quantitative tests as described later in the testimony.

Q. WHAT IS THE RELATIONSHIP BETWEEN THE MARKET REQUIRED RATE OF RETURN AND THE COST OF EQUITY?

A. The investors' required rate of return is often defined as that rate of return which equates the present value of expected cash flows to the current price of the security. The cost of equity funds raised by the company is that rate of return which equates the present value of the cash outflows to investors with the cash received initially.

If there were no expenses associated with issuance of common stock, the investors' return requirements would equal the company's cost of equity capital. Because the company has incurred costs associated with equity financing and therefore has received less cash than the value of equity securities issued, the cost of equity capital is greater than the investors' market required rate of return. The cost of equity is equal to the investors' market required rate of return plus a cost of capital adjustment for stock issuance costs.

Stock issuance costs and the cost of equity to USWC are discussed later in this testimony.

Discounted Cash Flow (DCF)

Q. PLEASE EXPLAIN THE CONCEPT OF THE DISCOUNTED CASH FLOW (DCF) METHODOLOGY UTILIZED IN YOUR TESTIMONY.

A. Discounted cash flow analysis proceeds from the financial theory that the price or value of any asset is equal to the present value of future cash flows that the asset is expected to produce.

The return required by common stock investors is a series of future cash flows consisting of dividend payments and proceeds from eventual sale of the stock.

> Discounted Cash Flow models are based on the concept that the value of a share of stock is equal to the present value of the cash flow that the stockholder expects to receive from it.[3] We will argue that this is equivalent to the present value of all future dividends.
>
> [3]There is a long history of discussion in the academic literature about what should be discounted. Some authors argued earnings, some dividends, and others earnings plus non-cash expenses such as depreciation. It turns out that, properly defined, these approaches are equivalent. See Miller and Modigliani [71] [Miller, M. and Modigliani, F. "Dividend Policy, Growth, and the Valuation of Shares" Journal of Business, 34 (Oct 61), pp. 411-433].
>
> (Edwin J. Elton and Martin J. Gruber, Modern Portfolio Theory and Investment Analysis, 4th Ed., New York: John Wiley & Sons, 1991, p. 449.)

By making the assumption of constant growth for dividends and by assuming that equity markets are relatively efficient, financial analysts have derived a DCF model which Brealey and Myers describe as "a simple way to estimate the capitalization rate":

> Suppose, for example, that we forecast a constant growth for a company's dividends. This does not preclude year-to-year deviations from the trend: It means only that expected dividends grow at a constant rate.
>
> To find its present value we must divide the annual cash payment by the difference between the discount rate and the growth rate:

$$P_0 = \frac{DIV_1}{r - g}$$

> Our growing perpetuity formula explains P_0 in terms of next year's expected dividend DIV_1, the projected growth rate g, and the expected rate of return on other securities of comparable risk r. Alternatively, the formula can be used to obtain an estimate of r from DIV_1, P_0, and g:

$$r = \frac{DIV_1}{P_0} + g$$

> The market capitalization rate equals the dividend yield (DIV_1/P_0) plus the expected rate of growth in dividends (g).
>
> (Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, 4th Ed., New York: McGraw-Hill, 1991, pp. 52-53.)

Appendix II provides more information on the DCF methodology.

Q. HOW IS THE DISCOUNTED CASH FLOW (DCF) METHODOLOGY USED TO ESTIMATE THE MARKET REQUIRED RETURN ON EQUITY?

A. The market required return (r or k) is the discount rate that equates all future cash flows (dividends) to the current price of the stock. Over the long term, it can be shown that the market required rate of return is equal to the compounded value of the next four expected quarterly dividends divided by the current market price plus the expected dividend growth rate.

Three variables are required for the DCF model:

1. Quarterly dividend payments for the next year.
2. Estimated growth in future dividends.
3. The current stock price.

Q. WHY IS IT NECESSARY TO ACCOUNT FOR QUARTERLY DIVIDENDS?

A. The timing of dividends is reflected in the current stock price. A stock paying four quarterly dividends is worth more than one paying a single annual dividend. This is similar in concept to the adjustment made in bond yield calculations to reflect that interest is paid twice a year. The timing and reinvestment of dividend payments must be considered in determining the return on a stock as illustrated in the following section from a current text on corporate finance:

> We have ignored the question of when during the year you receive the dividend. Does it make a difference? To explore this question, suppose first that the dividend is paid at the very beginning of the year, and you receive it the moment after you have purchased the stock. Suppose, too, that interest rates are 10 percent, and that immediately after receiving the dividend you loan it out. What will be your total return, including loan proceeds, at the end of the year?
>
> Alternatively, instead of loaning out the dividend you could have reinvested it and purchased more of the stock. If that is what you do with the dividend, what will your total return be? ...
>
> Finally, suppose the dividend is paid at year end. What answer would you get for the total return?
>
> As you can see, by ignoring the question of when the dividend is paid when we calculate the return, we are implicitly assuming that it is received at the end of the year and cannot be reinvested during the year. **The right way to figure out the return on a stock is to determine exactly when the dividend is received and to include the return that comes from reinvesting the dividend in the stock.** This gives a pure stock return without confounding the issue by requiring knowledge of the interest rate during the year.
>
> (Stephen A. Ross, Randolph W. Westerfield, and Jeffrey F. Jaffe, Corporate Finance, 2nd Ed., Homewood, IL: Richard D. Irwin Inc., 1990, p. 230.) [emphasis added]

During the course of a year, the stock investor has the value of the 1st quarter dividend for 3/4th's of the year; the 2nd quarter dividend for 1/2 of the year; the 3rd quarter dividend for 1/4th of the year, and the 4th quarter dividend that is received at the end of the year. Stocks are priced in the market consistent with the pure stock return described above. If companies suddenly shifted from paying quarterly dividends to paying a single annual dividend, investors would lose the reinvestment return, stock prices would fall, and the investors' market required return would rise.

Q. HOW DID YOU ESTIMATE THE EXPECTED GROWTH IN DIVIDENDS?

A. To estimate investors' expected growth in dividends, I relied upon growth estimates developed by professional analysts employed by large investment brokerage institutions. In gathering data on current analysts' forecasts, I utilized the monthly Institutional Brokers Estimate Service (I/B/E/S) which summarizes the research conclusions of individual investment analysts.

Q. **ARE ANALYSTS' FORECASTS A GOOD PROXY FOR INVESTOR GROWTH EXPECTATIONS?**

A. Yes. From the perspective of market practitioners, the investment markets are dominated by institutional investors. Over 40% of U S WEST stock is held by institutions and the majority of daily trading activity is done by those institutions. The analysts are advisors to the institutional traders who pay for their analysis and growth estimates. If investment analysts did not add value to the investment decision process, there would be no demand for their services.

The investment analysts consider broad economic and industry trends and expectations along with analysis of the historical antecedents of current corporate performance in making their estimates. The estimation techniques used by analysts include review of historical growth trends, internal growth generation, and estimates of external growth potential.

There are a number of academic studies which conclude that analysts' growth forecasts are superior to other methods of growth estimation such as historical data extrapolation and time series analysis.

The capital markets are dynamic and complex because of the interaction of investors buying and selling stocks. If it were possible to "stop the action" and query each market participant as to what their growth expectations are, that would be the very best estimate of investor growth expectations. The next best estimate is the consensus growth rate forecast of major investment analysts.

Q. WHAT IS YOUR SOURCE FOR THE CURRENT STOCK PRICE?

A. For the current price variable in the DCF model, I used an average of the daily closing stock prices for the ten trading days 8/18/98 to 8/31/98. I used a ten day average of stock prices to guard against the possibility that the selected stock price might be distorted by market reaction to a news story, heavy buying or selling by a particular institution, or some other distortion.

Q. WHAT ARE THE RESULTS OF YOUR DISCOUNTED CASH FLOW (DCF) ANALYSES?

A. Exhibit PCC-4 shows the DCF analysis for U S WEST Communications and Exhibit PCC-5 contains DCF analyses for other telephone companies. Exhibit PCC-6 shows the DCF analysis for comparable companies. The results of my DCF analyses are summarized as follows:

U S WEST	10.3%
Telephone Companies	12.3%
Comparable Companies	12.7%

Capital Asset Pricing Model (CAPM)

Q. WHAT IS THE CAPITAL ASSET PRICING MODEL?

A. The Capital Asset Pricing Model (CAPM) has been employed in finance for more than 25 years. It is among the most thoroughly researched concepts in modern finance, and the CAPM originators have been internationally recognized. Harry Markowitz and William Sharpe were 1990 Nobel Prize winners for their work in the area. Sharpe's Capital Asset Pricing Model is based upon Markowitz's formal analysis of portfolio choices involving both risk and return and is almost universally applied in portfolio and investment management.

CAPM theory develops a required return for systematic risk -- that risk intrinsic to market itself, which cannot be reduced by diversification -- and modifies that return for Beta -- the relative riskiness of a portfolio of stocks or an individual stock.

> The capital asset pricing model (CAPM) is a very intriguing adaptation of this basic relative risk premium approach. The model suggests that there is a relationship between risk and return; in fact, the higher the risk, the higher the expected return. This risk/return concept seems quite realistic: investors do expect greater rewards for taking greater risks, and the expected return for the common stock of any company is relative to its risk.
>
> (Diana R. Harrington, Corporate Financial Analysis, 4th Ed., Homewood, IL: Richard D. Irwin Inc., 1993, p. 203.)

The CAPM model defines the return on stock in terms of three variables:

The **risk free rate** of interest.

The **risk premium** paid for the market basket of stocks.

The **relative riskiness** of the individual stock in relation to the average of the market. In CAPM terminology, this is **Beta** (β).

The required return on the stock is equal to the risk free rate of interest plus Beta times the market risk premium.

The CAPM is often expressed in mathematical terms:

$$R_i = R_f + \beta_i(R_p)$$

Where: R_i = The expected return for a particular stock
R_f = The risk free return
β_i = Beta or the relative risk of the particular stock
R_p = Market risk premium

The CAPM provides an estimate of the market required return demanded by investors, and it is the investors' view that is important. In my use of the CAPM in this proceeding, I have quantified the variables from sources widely available to investors.

Q. IS THE CAPM WIDELY USED IN PRACTICE?

A. The CAPM is widely used by investors and finance professionals in real world, everyday situations:

> "CAPM follows logically from its assumptions, and it comes to a conclusion that is intuitively appealing. It makes sense that investors will price securities according to the contribution each makes to the risk of their overall portfolios. Thirty years ago we believed the risk of an individual security could be measured on the basis of the properties of its simple or marginal probability distribution, without regard to its relationships with other securities. The insight provided

by the CAPM was a major step forward in our understanding of the way securities are priced in the market place.

It is also true that the CAPM is an accepted model in the securities industry. It is used by firms to make capital budgeting and other decisions. It is used by some regulatory authorities to regulate utility rates. It is used by rating agencies to measure the performance of investment managers. It would not be so widely used if it were not regarded as an extremely useful benchmark."

(Robert A. Haugen, Modern Investment Theory, 3rd Ed., Englewood Cliffs, NJ: Prentice-Hall, 1993, p. 255.)

Q. **WHAT IS THE RISK FREE RATE?**

A. The risk free rate is generally accepted as that rate of interest paid by the United States Government on its Treasury notes and bonds. For estimating required returns for equity investors (stockholders), a long term risk free rate is commonly employed.

"R_f is the risk free rate of return. In theory this return should entail no risk, including any risk of purchasing power loss from the impact of inflation on prices. In practice, most analysts choose a proxy that includes inflation. For investors in U.S. securities, the proxy probably would be a U.S. Treasury instrument. The analyst would choose a Treasury bond that will be outstanding for a period similar to the asset being evaluated. Because equity securities have long lives, a longer-term U.S. treasury is a good choice."

(Diana R. Harrington, Corporate Financial Analysis, 4th Ed., Homewood, IL: Richard D. Irwin, 1993, pp. 204-205.)

In addition to matching the long life of equity securities, an intermediate to long term risk free rate is also appropriate to USWC's situation for these reasons:

1. Short term interest rates are volatile and setting USWC's rates based upon Treasury Bill yields could lead to frequent rate proceedings and volatile telephone rates.

2. Short term rates are heavily affected by external factors such as the Federal Reserve's monetary policy.

3. Empirical studies have shown that the true risk free rate is consistently higher than short term Treasury rates.

4. A long term focus is consistent with the asset lives and long term maturity debt structure of a company like USWC.

5. A long term focus is consistent with the time horizon involved in the DCF method (essentially infinite) which is also used in estimating the return required by equity investors.

My CAPM analysis utilizes both intermediate term (3-5-10 year) and long term (30 year) Treasury bond yields as risk free rates. (Average of yields as reported in the Federal Reserve H15 Report for 8/18/98 to 8/31/98)

Intermediate Term	5.18%
Long Term	5.45%

Q. HOW IS THE MARKET RISK PREMIUM DETERMINED?

A. Financial analysts generally estimate the expected risk premium of common stock over debt financing to be the difference in average realized returns for stocks and bonds over a long period of time. Although expectations are forward looking and realized returns are historical, over a very long period of time we would expect them to converge.

While returns on stocks and bonds vary from year to year, over time there is a substantial difference in the two investments. Research by Ibbotson Associates published in Stocks, Bonds, Bills and Inflation 1998 Yearbook: Market results for 1926-1997 indicates the following risk premium for common stocks over intermediate and long term government bonds for the 1926 through 1997 period:

	Return	Risk Premium
Common Stocks	13.0%	--
Intermediate Term Bonds	4.8%	8.2%
Long Term Bonds	5.2%	7.8%

These are the arithmetic mean returns, or the simple average of year to year returns over the 72 year period. For bonds, the income (or yield) return is used because when the bond is purchased, the yield to maturity reflects the market's expectation and thus the income return is an unbiased measure of expectancy. For stocks, which have no counterpart to the yield to maturity on bonds, the best measure of expected return is realized total returns.

I have used the arithmetic mean returns because they are most representative of the forward looking risk premium.

Q. **IT IS SOMETIMES SUGGESTED THAT A SHORTER PERIOD OF HISTORICAL DATA SHOULD BE USED TO ESTIMATE THE MARKET RISK PREMIUM. HAVE YOU CONSIDERED USING A SHORTER PERIOD?**

A. I have considered the issue of time period selection and have researched the financial literature and conclude that utilizing the full range of data available is the best approach. The market risk premium varies over time around some average or mean. The best estimate of that average or mean, and thus the best measure of the expected risk premium is the average risk premium over the longest period for which high quality data is available. That period of time is 72 years -- 1926 to 1997. This is explained in the well known and widely adopted works by Ibbotson Associates:

> A proper estimate of the expected risk premium requires a long data series, long enough to give a reliable average without being unduly influenced by very good and very poor short term returns. When calculated using a long data series, the historical risk premium is relatively stable. Furthermore, because an average of the realized equity risk premia is quite volatile when calculated using a short series, a long series makes it less likely that the analyst can justify any number he or she wants.
>
> Some analysts calculate the expected risk premium over a shorter, more recent time period on the basis that more recent events are more likely to be repeated in the near future; furthermore, the 1920s, 1930s, and 1940s contain too many unusual events. This view is suspect because all periods contain unusual events. Some of the most "unusual" events of this century took place quite recently. These events include the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high yield bond market, the major contraction and consolidation of the thrift industry, and the collapse of the Soviet Union -- all of which happened in the past 20 years. Without an appreciation of the 1920s and 1930s no one would believe that such events could happen. More generally, the 72 year period starting with 1926 is representative of what can happen: it includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect "unusual" events to occur from time to time and their return expectations reflect this.
>
> (Ibbotson Associates, Stocks Bonds Bills and Inflation 1998 Yearbook: Market Results for 1926-1997, Chicago: Ibbotson Associates, 1998, pp. 156-157.)

Q. IS THERE ANY ALTERNATIVE TO SELECTING A PAST TIME PERIOD AS REPRESENTATIVE OF THE EXPECTED MARKET RISK PREMIUM?

A. Yes, there is. As an alternative procedure, we can make a direct estimate of the current market risk premium. The DCF model can also be used to develop an expected (ex ante) market risk premium:

> The most fruitful approach to ex ante premiums uses the discounted cash flow (DCF) model to determine the expected market rate of return. In other words, use DCF to develop a current estimate of k_M; then find $RP_M = k_M - R_f$; and use this estimate of RP_M in the CAPM model.
>
> (Eugene F. Brigham and Louis C. Gapenski, Financial Management Theory and Practice 4th Ed., Chicago: The Dryden Press, 1985, p. 282.)

Professor Harrington also suggests this approach as an alternative to the long term historical return:

> R_m is the expected return on an average risk asset. Analysts have used two ways to determine the average expected return. One is a risk premium approach: the long term historical return on the risk-free asset is subtracted from the historical return on a proxy for all assets. ... Analysts also use an estimate of the expected market premium. This estimate may come from information derived from security analysts working in money management companies whose job it is to make forecasts for individual stocks. Putting all the forecasts together produces a consensus estimate of the expected U.S. stock market return.
>
> (Diana R. Harrington, Corporate Financial Analysis, 4th Ed., Homewood, IL: Richard D. Irwin, 1993, p. 208.)

Q. WHAT ARE THE CURRENT MARKET RISK PREMIUM ESTIMATES USING THE DCF EX ANTE METHOD ABOVE?

A. Using my DCF estimate for the expected return on the S&P 500 Index of 14.8% and the intermediate and long term risk free rates of 5.18% and 5.45%, the ex ante expected market risk premium estimates are 9.6% and 9.4%:

14.8% - 5.18% = 9.6%

14.8% - 5.45% = 9.4%

Q. WHAT MARKET RISK PREMIUM WILL BE USED IN YOUR CAPM ANALYSIS?

A. My CAPM analysis will use an average of the ex post risk premiums from the Ibbotson Associates data (see page 56) and the ex ante risk premiums described above. The intermediate term market risk premium is 8.9% and the long term market risk premium is 8.6%.

Q. HOW DID YOU DETERMINE BETA?

A. Beta is typically estimated as the volatility of the individual stock in relation to the volatility of a market index such as the S&P 500. There are brokerage companies and investment advisors which calculate and provide Betas to investors.

> In recent years, β risk has become an important factor in security analysis, so much so that many stock brokerage companies and investment advisors regularly publish the β's for virtually all publicly traded common stocks.
>
> (Robert C. Higgins, Analysis for Financial Management, 3rd Ed., Homewood, IL: Richard D. Irwin, 1992, p. 290.)

My Beta estimates for telephone companies and comparable risk companies are the average of the current Beta information provided by Merrill Lynch and Value Line. USWC does not have the five years of stock trading history required for Merrill Lynch and Value Line Beta estimates and a different procedure was used to estimate USWC's Beta. I estimated the Beta for USWC by using daily market return information for USWC and the S&P 500 stock index for the period from 11/1/95 (when USWC stock began trading) to 8/31/98. The raw (or unadjusted) Beta for USWC is .61. When adjusted to a comparable basis for Merrill Lynch and Value Line Betas, the adjusted Beta for USWC is .76. Betas and CAPM estimates are detailed in Exhibits PCC-7, PCC-8 and PCC-9.

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A. The results of my CAPM analysis are summarized as follows:

	Intermediate Term	Long Term	Average
USWC	12.0%	12.0%	12.0%
Telephone Companies	13.1%	13.1%	13.1%
Comparable Companies	12.8%	12.9%	12.9%

Comparable Companies

Q. WHY DO YOU ANALYZE COMPARABLE RISK COMPANIES TO ESTIMATE THE COST OF EQUITY CAPITAL FOR USWC?

A. As discussed in the testimony section, **Fair Return Concepts**, the standards applicable in determination of a fair return for a regulated utility are derived from Supreme Court cases. These cases recognize the basic point that there is an opportunity cost associated with funds supplied to utilities by outside investors. That cost is the expected return foregone by not investing in a competing investment of corresponding risks.

The investors' choices are not limited to telecommunications companies or other regulated company investments. Rather, the investment decision is a balance between risk and expected return offered by competing investment choices. Since all publicly traded companies offer a significant investment alternative, it is proper to analyze market data associated with comparable risk companies to estimate the cost of equity capital for USWC.

Q. HOW DID YOU SELECT COMPANIES COMPARABLE TO USWC?

A. I screened the Standard and Poor's Compustat data base which contains public financial information on more than 9,000 firms to identify companies with risk characteristics similar to USWC.

Q. HOW DID YOU DEVELOP THE SCREENING CRITERIA?

A. I utilized two indicators that quantify the overall risk of company operations similar to USWC. In efficient markets, investors require similar returns for similar risks. By identifying publicly traded companies with risks similar to USWC, we can estimate the investors' return requirement for USWC. The risk indicators and screening criteria are:

Risk Indicator	Screening Criteria
S&P Bond Rating	A+ or greater
Cash Flow Variability	Publicly traded companies with cash flow variability similar to USWC.

Q. HOW DO THESE PARAMETERS CAPTURE THE RISK OF USWC?

A. Bond ratings are a good overall assessment of risk. The ratings are established and updated by professional analysts with economy wide and industry specific criteria to facilitate comparison of company risks across the full spectrum of publicly traded companies. The rating agencies consider business and financial risks, cash flow, leverage, interest coverage, operating efficiency, economics, industry outlook and many other quantitative and qualitative factors. The bond rating process culminates in the letter grade ratings which provide to investors a convenient, reliable stratification of the risks among companies.

USWC is rated "A+" by S&P and the screening criteria of "A+ or higher" is conservative in that companies with equal or lower risk are being selected for comparison. Some of the selected companies will have lower risk than USWC.

Cash flow is the basic earning power of firms. Cash flow is the basis for earnings, dividends, and reinvestment. Variability in cash flow is a fundamental risk factor. Given a choice of two investments, an investor will expect a higher return for the alternative with greater cash flow variability. By quantifying the variability of cash flows it is possible to identify companies with risk and return expectations similar to USWC. Companies with stable cash flows are less risky than companies with wide variation in cash flow. Cash flow variability is measured as the standard deviation of year over year change in cash flow from operations for the period 1989 through 1997.

Q. WHAT KINDS OF COMPANIES ARE IN THE COMPARABLE GROUP?

A. Basically, they are large, well known companies. A review of Exhibit PCC-6 and Exhibit PCC-9 shows companies like Johnson & Johnson, McDonalds, and 3M. The companies are well known to individual and institutional investors alike and are risk comparable investments that USWC must compete with for its financing.

Q. HOW CAN THESE COMPANIES BE COMPARABLE TO USWC WHEN THEY ARE NOT IN THE SAME INDUSTRY?

A. Actually, a number of telephone companies were in the screened group, but were removed because they are already included in the cost of equity estimate analysis as part of the telephone company group. The fact that telephone companies were included in the comparable group screen validates the criteria to screen for comparable risk companies. The remaining group of companies is comparable to USWC in the risk exposure offered to investors. This risk exposure governs the investors' expected return and establishes the cost of equity capital. Investment in these companies as a group or a portfolio, not as individual company investments is comparable to investment in USWC. In addition, the investor is expecting a both a return **on** and a return **of** his/her investment. An individual company's industry or products are only one factor. The primary question the investor attempts to address is what is the total risk/return reward surrounding my expected future cash flows?

Market Required Return Estimate For USWC

Q. PLEASE SUMMARIZE YOUR ESTIMATES OF THE MARKET REQUIRED RATE OF RETURN FOR USWC.

A. I have conducted an analysis using DCF and CAPM methods to estimate the market required return on equity for USWC. The results of these methods are summarized as follows:

			Market Required Return
DCF	-	U S WEST	10.3%
CAPM	-	U S WEST Communications	12.0%
DCF	-	Telephone Companies	12.3%
DCF	-	Comparable Companies	12.7%
CAPM	-	Comparable Companies	12.9%
CAPM	-	Telephone Companies	13.1%

Q. HOW SHOULD THESE RESULTS BE INTERPRETED?

A. The DCF estimate for U S WEST is clearly out of range compared to the other estimates. In statistical terms, that estimate is an "outlier". For the six estimates shown above, the mean is 12.2% and the standard deviation is 1.0%. The 10.3% DCF estimate for U S WEST is nearly two standard deviations below the mean of 12.2% while all the other estimates are within one standard deviation.

Leaving out the 10.3% estimate, the remaining five estimates have a mean of 12.6% and a standard deviation of .45%. Three of the five estimates fall within one standard deviation of the mean and the other two are only slightly greater than one standard deviation from the mean. The 10.3% estimate would be more than five standard deviations from the mean of 12.6%.

Excluding the U S WEST DCF estimate, the results cluster in a fairly narrow range from 12.0% to 13.1%. I believe the best estimate of the market required equity return for U S WEST Communications is this range of 12.0% to 13.1%.

REASONABLENESS TESTS

Q. HOW CAN A MARKET REQUIRED RETURN ESTIMATE BE TESTED FOR REASONABLENESS?

A. It is important to test market required return estimates against some benchmark or external standard to ensure that the estimate is reasonable and not biased either too high or too low. I recommend two reasonableness tests for the Commission to use in evaluating the range of estimates presented in this docket. The first test is the expected return on the market of stocks and the second test is the risk premium of equity securities over debt securities. Reasonableness tests aren't intended to substitute for required return estimates more rigorously developed using DCF and CAPM models. They are a check to insure that the estimate is consistent with other observed risk/return relationships.

Expected Return on the Market

Q. WHAT IS THE EXPECTED RETURN ON THE MARKET OF STOCKS?

A. The expected return on the market of stocks (or expected return on the "market") is the investor expected return on a broad based measure of the stock market as a whole. Stated another way, the expected return on the market is the market required return for the average stock of average risk.

Q. HOW DO YOU DEFINE THE MARKET?

A. I have defined the market in terms of a well known and widely used measure of the stock market; the Standard & Poor's 500 Index (S&P 500). The S&P 500 makes up more than 80% of the total value of the New York Stock Exchange and is a market measure used in the calculation of individual stock Betas.

Q. HOW DO YOU FIND THE EXPECTED RETURN ON THE MARKET?

A. The expected return on the market is determined in the same fashion that the expected return (or market required return) is estimated for an individual company -- that is using the DCF and CAPM methods. The DCF estimate of the expected return on the S&P 500 (from Exhibit PCC-11) is 14.8%. The CAPM estimate (from Exhibit PCC-12) is 14.1%. Averaging these two model estimates indicates that investors are currently expecting a return of 14.5% on the market.

The expected return on the S&P 500 stocks provides a benchmark for evaluation of the reasonableness of market required return estimates for USWC. The S&P 500 is commonly used as a benchmark for evaluating investment managers' performance and is popular as a diversified equity portfolio mutual fund or "Index Fund" investment.

Q. HOW SHOULD THE EXPECTED RETURN ON THE MARKET BE USED AS A BENCHMARK TO EVALUATE THE REASONABLENESS OF THE ESTIMATE OF USWC'S COST OF EQUITY CAPITAL?

A. The expected return on the market can be viewed as the market expected return of the average stock and can be used as the benchmark for evaluating the expected return estimate for the individual firm. The appropriate question would be, "Is the firm, in this case USWC, more risky, less risky, or about the same risk as the average stock?" The evidence I have presented indicates that USWC is of slightly below average risk. This evidence is in the form of Beta estimates for publicly traded companies of comparable risk to USWC. Beta measures the total risk of the individual company or group of companies relative to the risk of the market as a whole. A Beta of 1.0 indicates risk equal to the market average. A Beta greater than 1.0 indicates risk greater than the market average and a Beta less than 1.0 indicates risk less than the market average.

My testimony shows a Beta estimate for USWC of .76 , an average Beta of .89 for the Telephone Companies group and an average of .85 for the group of comparable companies. As discussed earlier, taken by itself, Arizona has a higher risk profile than USWC as a whole. It is my opinion that if USWC – Arizona were a separately financed company, it would have higher risk than USWC as a whole, and thus would have beta risk closer to the market average of 1.0.

Given these Beta estimates, the expected return estimate for USWC should be slightly lower than the expected return on the market.

Q. HOW DO THE ESTIMATES OF USWC'S COST OF CAPITAL COMPARE TO THE MARKET EXPECTED RETURN BENCHMARK?

A. Recall that the expected return on the market was estimated at 14.5% and the Beta estimates for USWC indicate slightly lower risk (and thus return) relative to the market. My estimated market required return range of 12.0% to 13.1% for USWC is confirmed as reasonable by the market expected return benchmark.

Equity Risk Premium

Q. WHAT IS THE EQUITY RISK PREMIUM TEST OF REASONABLENESS?

A. The equity risk premium test is based on the risk and return differential between common stocks and corporate bonds. Stocks are a riskier investment than bonds and must offer a higher expected return to investors. This risk/return differential is consistent with financial theory and is empirically validated in the financial markets. On an individual company level, it is obvious that any return to common stockholders (dividends and capital gain) comes only after interest payments to the bondholders. The common stockholders have the most junior claim on the cash flow of the corporation and bear the most risk. The return expected by common stockholders for assuming this risk is substantially higher than the return expected by bondholders in the same firm.

Q. WHAT IS THE MAGNITUDE OF THE EQUITY RISK PREMIUM?

A. Like the market risk premium discussed in the section on CAPM, the equity risk premium can be estimated **ex post**, using a historical period as a proxy for the current and expected premium, or **ex ante**, using a DCF estimate of the expected return on the market minus current bond yields.

The Ibbotson Associates 1926-1997 study compares market returns among asset classes and provides data for the longest period of time for which quality data is available. The average of 72 years of data shows that the average return on the average stock is 6.9% higher than the average return on the average corporate bond. (See Exhibit PCC-13). This is the ex post equity risk premium.

Ex ante risk premium estimates require an estimate of the cost of equity for a particular company, group of companies, or the market as a whole, along with current expected yield information for corporate bonds.

The expected bond yield of 7.1% is yield to investors on new and recently issued A rated long term bonds. (See Exhibit PCC-13).

Taking my DCF estimate for the expected return on the S&P 500 Index of 14.8% and subtracting the expected bond yield of 7.1% gives an expected equity risk premium of 7.7%.

Q. DOES THE EQUITY RISK PREMIUM NEED TO BE RISK ADJUSTED?

A. Both the ex post and ex ante risk premiums developed above are based on the additional return required for equity investment in a stock of average risk. Recall from the discussion on the expected return on the market benchmark that we found the risk of USWC close to, but slightly lower than the risk of the market. In terms of Beta, I estimate the Beta of USWC-Arizona to be between .76 and .89. Adjusting the equity risk premium for this Beta range, the following risk premium estimates are an appropriate benchmark to evaluate cost of equity estimates for USWC:

	Range
Ex Post Risk Premium	5.2% - 6.1%
Ex Ante Risk Premium	5.9% - 6.9%

Q. HOW IS THE RISK PREMIUM REASONABLENESS TEST IMPLEMENTED?

A. Combining the above range of equity risk premiums with the 7.1% cost of debt provides a risk premium reasonableness test range of 12.3% to 14.0%. My market required return estimate for USWC is at the low end of the range.

COST OF EQUITY AND RECOMMENDED RETURN

Stock Issuance (Flotation) Costs

Q. WHY MUST A RECOGNITION BE MADE FOR STOCK ISSUANCE (FLOTATION COSTS)?

A. Because there is a difference in the amount of equity investment by the stockholder and the net proceeds received by the company, the cost of equity capital to the company has to be greater than the return required by investors.

Here is an example to illustrate the situation:

A company sells 1 million shares of stock at $25 ($25,000,000) to investors who are expecting a 12% annual return. ($3 per share or $3,000,000 total).

In issuing the new stock, the company incurred expenses for underwriting commissions, legal fees, stock certificate printing, etc. of $750,000, or 3% of the stock issue.

The proceeds of the stock sale to the company are $24,250,000 ($25,000,000 - $750,000 expenses) and this $24,250,000 goes on the company's books as stockholders equity.

In setting the corporate goals and budget, the Chief Financial Officer knows that net income of $3,000,000 or $3 per share is needed to meet the shareholders' expectation -- the market required rate of return of 12%. This net income can be paid out entirely as dividends, retained entirely for reinvestment in the business, or paid out and retained in some combination according to the desires of the shareholders.

That same $3,000,000 net income is a return on book equity or cost of equity capital to the firm of 12.37% ($3,000,000/$24,250,000 = 12.37%).

The point of this example is that the cost of equity capital (or return on the equity capital that the company receives from shareholder investment) is always greater than the market required rate of return because of the expense of issuing stock.

Q. DON'T WE HAVE THE SAME SITUATION WITH BONDS AND THEIR ISSUING COSTS?

A. Yes. Bonds have issuing expenses and the interest rate cost to the company is always greater than the yield to the investors, so the principle is exactly the same. The cost of debt includes the amortization of bond issuance expenses over the life of the debt.

Q. **HAVE COMMON EQUITY HOLDERS ALREADY ACCOUNTED FOR STOCK ISSUANCE COSTS IN ESTABLISHING THE CURRENT PRICE OF THE STOCK?**

A. No. Stock Issuance costs are the underwriters' commissions and other costs of issuing stock to the public. They are paid by the company, not by the stockholders. Consider the following example: A company's stock is selling for $35 per share in the market and it wishes to sell additional shares. The company's investment banker advises the company that it will cost $1 per share (about 3%) to sell the new stock. The company cannot sell the new shares for more than the market price (i.e. $36; $35 plus the $1 issuing cost) because there is no difference between the new shares and the old shares. Investors (stockholders) will only pay the market price, $35, for the new shares. Thus, the investor pays $35 for the new share, but the company only receives $34 ($35 minus the $1 issuing cost). The investor expects a competitive return on the $35 paid for the share, but the company has only $34 with which to purchase assets to provide that competitive return. This is the reason why the cost of equity capital to any company is slightly greater than the return required by the equity investor on his or her common stock investment in that company.

Q. **WHEN A COMPANY CAN ISSUE NEW STOCK AT A PRICE ABOVE BOOK VALUE, IS THERE STILL A NEED FOR A STOCK ISSUANCE COST ADJUSTMENT?**

A. Yes. Stock issuance costs are incurred whenever new stock is issued to the public without regard to whether the market price of the new stock is above book value, equal to book value, or below book value. The cost of issuing new stock is not related to the book value of the company.

Q. **IS THERE A DIFFERENCE BETWEEN REGULATED AND UNREGULATED COMPANIES ON THE STOCK ISSUANCE COST ISSUE?**

A. There is no difference. Because of stock issuance costs, the need to achieve a return on book equity greater than the market required return is the same for both unregulated and regulated companies.

Q. **WHAT ARE THE STOCK ISSUANCE COSTS FOR USWC?**

A. As shown in Exhibit PCC-10, U S WEST, Inc., the equity market interface for USWC prior to issuance of targeted stock and the split off of MediaOne, has stock issuance costs associated with public stock issues in 1990, 1993, and 1994, with the dividend reinvestment plan, and with the company's initial capitalization. The weighted cost for all stock issued (public issues and non-public financing without issuance expenses) is 2.0% of the gross proceeds. In other words, for every $100 of stockholder investment, the company has $98.00 of paid in capital.

Q. **HAS USWC HAD A PUBLIC STOCK ISSUE SINCE THE TARGETED STOCK RECAPITALIZATION?**

A. No. USWC has not incurred any additional stock issuance costs since the November 1, 1995 targeted stock Recapitalization.

Q. HOW DO YOU ACCOUNT FOR THE STOCK ISSUANCE COSTS ASSOCIATED WITH THE EQUITY CAPITAL ON USWC'S BOOKS?

USWC has $7,852.6 million in shareholders equity on its books. $4,512.8 million is paid in capital, and $3,339.8 million, retained earnings. The paid in capital came from U S WEST stock financing and has associated issuance costs that need to be recognized in the return on equity authorized for USWC by the Arizona Corporation Commission.

The $4,512.8 million paid in capital on USWC's books is the net amount after direct stock issuance expenses (Underwriting discounts, commissions, legal fees, etc.) of 2.0%. Equity capital supplied by the stockholders is:

$$\frac{\$4{,}512.8\text{m}}{(1 - .02)} = \$4{,}604.9\text{m}$$

USWC's stock issuance costs in dollars are:

$$\$4{,}604.9\text{m} - \$4{,}512.8\text{m} = \$92.1\text{m}$$

As a percent of total equity (including retained earnings), issuance costs are:

$$\frac{\$92.1\text{m}}{\$7{,}852.6\text{m}} = 1.17\%$$

Q. DID TARGETED STOCK OR THE COMPANY SPLIT AFFECT THESE EXPENSES?

A. No. Neither the targeted stock split nor the company split changed the equity capitalization of USWC and thus have not affected these issuance expenses.

Q. HOW SHOULD THE COMMISSION DEAL WITH STOCK ISSUANCE EXPENSES?

A. These issuance cost expenses need to be recognized in setting rates for Arizona customers. The market required return of 12.0% to 13.1% needs to be adjusted upward to reflect the cost of equity capital which includes recovery of stock issuance costs. The adjustment is as follows:

Market Req Return	x	Adj Factor	=	Cost of Equity
12.0% to 13.1%		1.0117		12.1% to 13.3%

Recommended Range For Cost Of Equity

Q. WHAT IS YOUR RECOMMENDATION FOR A FAIR RETURN ON EQUITY?

A. A fair return on equity is equal to the cost of equity capital, which is in the range of 12.1% to 13.3%. My point recommendation is 13.0%. Reflecting the higher risk of USWC Arizona, this recommendation is higher than the range midpoint of 12.7%.

OVERALL RATE OF RETURN RECOMMENDATION

Q. WHAT IS YOUR RECOMMENDATION FOR A FAIR OVERALL RETURN ON RATE BASE FOR USWC?

A. Using the fair return on book equity and USWC's actual capital structure and embedded debt cost, I recommend the following as a fair return on rate base:

	Percent	Cost	Weighted Cost
Debt	41.2%	7.52%	3.10%
Equity	58.8%	13.0%	7.64%
Overall Return			10.74%

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

APPENDIX I

PREVIOUS TESTIMONY OF PETER C. CUMMINGS

Jurisdiction	Docket	Jurisdiction	Docket
Minnesota	GR-83-600	Arizona	U-3021-96-448
South Dakota	F-3520	New Mexico	96-4121-TC
FCC	84-800	Utah	94-999-01
Oregon	UT-43	Nebraska	C-1473
Oregon	UT-65	Iowa	RPU-96-9
Oregon	UT-85	Colorado	96S-331T
Oregon	UM-280	Minnesota	P-421-CI-96-1540
Washington	U-89-3524-AT	Wyoming	70000-TR-96-223
Utah	90-049-06	Utah	97-049-08
Arizona	E-1051-91-004	Colorado	97K-237T
Montana	90.12.86	Wyoming	70000-TS-96-319
Iowa	RPU-91-4	Wyoming	72000-TS-96-95
Utah	92-049-05	New Mexico	96-310-TC
New Mexico	92-227-TC	New Mexico	97-334-TC
Arizona	E-1051-93-183	Minnesota	P-999/M-97-909
Iowa	RPU-93-9	Wyoming	General Order 81
Washington	UT-950200	North Dakota	PU-314-97-12
Utah	95-049-05	Oregon	UM 731
Oregon	UT-125	Montana	D97.9.167
Idaho	USW-S-96-5	Wyoming	70000-TT-97-378
Minnesota	P-442,421/M-96-855	Nebraska	C-1415
Minnesota	P-466,421/M-96-1097		
Nebraska	C-1385		
Utah	96-087-03		

APPENDIX II

DISCOUNTED CASH FLOW MODEL

The present value of any series of future cash flows is the summation of those cash flows after discounting them by a discount rate. Mathematically the concept is expressed as:

$$PV = \frac{CF_1}{(1+k)^1} + \frac{CF_2}{(1+k)^2} + \frac{CF_3}{(1+k)^3} + \dots \frac{CF_n}{(1+k)^n}$$

Where: PV = Present value of cash flows

CF_n = Cash flow in period n

k = Discount rate

In the case of common stock investment, the present value of future cash flows (PV) equals the market price of the stock (P_0), which is set by investors. The cash flows consist of quarterly dividend payments and proceeds from sale of the stock.

The discount rate is the percentage return on equity investment to the stockholder.

$$P_0 = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \dots \frac{D_n+P_n}{(1+k)^n}$$

Where: P_0 = Current stock price

P_n = Stock price in future period n

D_n = Dividend payment in period n

k = Discount rate or rate of return

The principal appeal of the DCF approach lies in its simplicity and correspondence with the intuitive notion of dividends plus capital appreciation as the measure of investors' total expected return.

Building on the concept of valuation in terms of dividends and terminal price of the stock (capital appreciation), Elton and Gruber show that the value of a stock can be expressed in terms of dividends only:

we find that

$$P_t = \frac{D_{t+1}}{(1+k)} + \frac{D_{t+2}}{(1+k)^2} + \frac{D_{t+3}}{(1+k)^3} + \ldots \frac{D_{t+n+1}}{(1+k)^{n+1}} + \ldots$$

or that the value of share of stock is equal to the present value of all future dividends.[1]

From the basic valuation equation, Elton and Gruber add the assumption of constant growth in dividends[2] to derive the Constant Growth Model

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[1] Edwin J. Elton and Martin J. Gruber, Modern Portfolio Theory and Investment Analysis, 4th Ed., New York: John Wiley & Sons, 1991, p. 451.

Elton and Gruber go on to point out that this equation can be used to estimate price (*p*) from estimates of future dividends and the discount rate (*k*). Alternatively the present market price can be substituted for price (*p*) and combined with estimates of future dividends to estimate the discount rate (*k*) or the rate of return the stockholder will earn on the stock.

[2] There are additional assumptions implicit as well. Weston and Copeland explain:

> "A number of assumptions underlying the dividend valuation model should be noted to understand how it may be used to estimate the required return on equity for a firm. The growth rate (*g*) refers to growth in dividends. Since *g* is the product of the retention rate times the internal profitability rate, this indicates that the model is an all internal equity financing model. Retained earnings is the only source of financing investment in this

One of the best known and certainly the simplest DCF model assumes that dividends will grow at the same rate (g) into the indefinite future. Under this assumption the value of a share of stock is

$$P = \frac{D}{(1+k)} + \frac{D\,(1+g)}{(1+k)^2} + \frac{D\,(1+g)^2}{(1+k)^3} + \dots + \frac{D\,(1+g)^{N-1}}{(1+k)^N} + \dots$$

Using the formula for the sum of a geometric progression[3],

$$P = \frac{D}{k - g}$$

This model states that the price of a share of stock should be equal to next year's expected dividend divided by the difference between the appropriate discount rate for the stock and its expected long-term growth rate. Alternatively, this model can be stated in terms of the rate of return on a stock as[4]

$$k = D/P + g$$

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model. Furthermore, constant growth is required. There is no period of supernormal or subnormal growth and the constant growth continues through infinity.

The logic of the model indicates that the *g* refers to the growth rate in dividends, but under the assumptions of the model everything else also grows at the same rate. If dividends grow at 12 percent, and the payout ratio and retention rate are constant, earnings must be growing at the same 12 percent. And over time, the value of the firm or the price of its common stock will be growing at a 12 percent rate as well. Clearly there is a relationship between *p*, the price of the common stock, and the growth rate in earnings, dividends, and the total assets of the firm. Thus, the model does not provide an unambiguous basis for estimating k_s."

J. Fred Weston and Thomas E. Copeland, Managerial Finance, 9th Ed., Fort Worth, TX: The Dryden Press, 1992, pp. 611-612.

[3] The formula for the sum of a geometric progression is illustrated in a footnote on page 453 of Elton and Gruber Op. cit. and can also be found in Frank K. Reilly, Investment Analysis and Portfolio Management, 3rd Ed., The Dryden Press, 1989, pp. 339-340.

[4] Op. cit., pp. 453-454.

This is the basic DCF model for stock valuation derived from the initial assumptions of a single cash flow per period and annual periods of time. Further examination of these initial cash flow assumptions indicates they are not well aligned with the cash flows of common stock investment. Most companies pay dividends quarterly and increase dividend levels annually. Brigham and Gapenski explain why the basic DCF model needs to be modified for quarterly dividend cash flows:

A Quarterly Stock Valuation Model

"Throughout Chapter 5 we discussed stock valuation and rates of return on the assumption that dividends are received once a year. In fact, most companies pay dividends on a quarterly basis, and increase them annually. ... If annual payments occur, and growth is constant, then equations 5C-1 and 5C-2 are appropriate:

$$P_0 = \frac{D_1}{k-g} \qquad (5C\text{-}1)$$

$$k = \frac{D_1}{P_0} + g \qquad (5C\text{-}2)$$

However, if dividends are paid quarterly, and they grow once a year, then equations 5C-3 and 5C-4 are appropriate:

$$P_0 = \frac{D_{q1}(1+k)^{0.75} + D_{q2}(1+k)^{0.50} + D_{q3}(1+k)^{0.25} + D_{q4}(1+k)^{0}}{k - g} \qquad (5C\text{-}3)$$

$$k = \frac{D_{q1}(1+k)^{0.75} + D_{q2}(1+k)^{0.50} + D_{q3}(1+k)^{0.25} + D_{q4}(1+k)^{0}}{P_0} + g \qquad (5C\text{-}4)$$

Here D_{qt} is the quarterly dividend in Quarter t, k is the expected and required rate of return, and g is the annual dividend growth rate. ...

The logic here is similar to that involved in the analysis of a semiannual payment bond: A bond is more valuable if its payments occur every six months, and its effective annual rate of return is higher. Similarly, a stock that pays dividends quarterly is more valuable than an annual payment stock, other things held constant, and its effective annual return is higher."[5]

The quarterly stock valuation model appears to add complexity to an estimation process that also relies, in part, upon the judgment of the analyst[6], but the quarterly DCF model offers significant benefits and the calculation can easily be performed on a financial calculator or personal computer.

> "The use of a quarterly DCF model has at least two important implications. First, when quarterly dividend payments are taken into account, required rates of return on stocks are significantly higher than those estimated by an otherwise equivalent annual dividend payment model. Second, whenever returns on stocks, bonds, T-bills, or any other securities are being compared, it is important to convert all returns to a common basis -- the effective *annual rate* or APR."[7]

The DCF model employed in this testimony is the quarterly DCF model derived as described above and restated as follows:

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[5] Eugene F. Brigham and Louis C. Gapenski, Financial Management: Theory and Practice, 4th Ed., Chicago: The Dryden Press, 1985, pp. 176-177.

[6] "One could argue that, given the uncertainty inherent in the basic data required for a DCF analysis of common stock, the refinements entailed in the quarterly model are not worth the effort. We have three responses. First, the quarterly model is correct and the annual model is simply incorrect for most firms; and to the extent that it is better to use correct rather than incorrect models, one should use the quarterly DCF model. Second, the differences in calculated rates of return are not trivial, and the annual model always *understates the* APR *return* on a stock which pays dividends quarterly; therefore, to avoid biases (which vary across firms and industries, depending on payout policy), one should make the quarterly adjustment. And third, with a relatively inexpensive personal computer, the analysis is really quite easy."

Eugene F. Brigham and T. Craig Tapley, "A Quarterly DCF Model", Journal of Corporate Finance, Winter 1987, p. 32.

[7] Eugene F. Brigham and T. Craig Tapley, "A Quarterly DCF Model", Journal of Corporate Finance, Winter 1987, pp. 26-27.

$$k = \frac{D_1(1+k)^{0.75} + D_2(1+k)^{0.50} + D_3(1+k)^{0.25} + D_4(1+k)^{0}}{P_0} + g$$

Where:

k = Required rate of return

D_1 = The next four
D_2 quarterly dividends
D_3 to be received by
D_4 investors

g = Expected dividend growth

P_0 = Current market price

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

EXHIBITS OF

PETER C. CUMMINGS

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

RATE OF RETURN RECOMMENDATIONS

Return on Equity Range	12.1%	to	13.3%
Point Recommendation		13.0%	
Overall Return Range	10.21%	to	10.92%
Point Recommendation		10.74%	

Telephone Operating Company Debt Ratios
(Dollar Amounts Shown in Thousands)

Local Exch. Carrier	Debt 1996	Debt 1997	Equity 1996	Equity 1997	Total Capital 1996	Total Capital 1997	Debt Ratio 1996	Debt Ratio 1997
Aliant Comm Co	43,907	43,935	168,270	175,955	212,177	219,890	20.7%	20.0%
ALLTEL Georgia	194,651	198,901	318,638	321,118	513,289	520,019	37.9%	38.2%
ALLTEL Pennsylvania	77,639	68,083	122,864	139,319	200,503	207,402	38.7%	32.8%
Bell Atlantic-DE	133,908	150,856	202,000	206,794	335,908	357,650	39.9%	42.2%
Bell Atlantic-MD	1,030,800	1,095,705	1,440,941	1,290,088	2,471,741	2,385,793	41.7%	45.9%
Bell Atlantic-NE Tel	2,167,259	2,174,183	3,208,128	3,171,236	5,375,387	5,345,419	40.3%	40.7%
Bell Atlantic-NJ	1,524,578	1,688,532	2,332,170	2,122,778	3,856,748	3,811,310	39.5%	44.3%
Bell Atlantic-NY Tel	3,897,352	3,795,009	4,736,261	4,504,160	8,633,613	8,299,169	45.1%	45.7%
Bell Atlantic-PA	1,621,919	1,685,744	2,265,440	1,987,374	3,887,359	3,673,118	41.7%	45.9%
Bell Atlantic-VA	996,367	1,054,643	1,234,493	1,074,207	2,230,860	2,128,850	44.7%	49.5%
Bell Atlantic-Wash DC	289,736	251,807	412,058	464,616	701,794	716,423	41.3%	35.1%
Bell Atlantic-WVA	263,512	263,636	371,526	374,364	635,038	638,000	41.5%	41.3%
BellSouth Telecomm	8,064,527	7,951,669	10,956,042	10,872,273	19,020,569	18,823,942	42.4%	42.2%
Carolina Tele & Tel	335,616	349,633	527,551	534,464	863,167	884,097	38.9%	39.5%
Central Tel Co Illinois	51,689	0	87,673	67,799	139,362	67,799	37.1%	0.0%
Central Tel Co Virginia	106,684	118,469	140,755	154,139	247,439	272,608	43.1%	43.5%
Central Telephone	314,267	399,307	1,283,403	1,304,890	1,597,670	1,704,197	19.7%	23.4%
Cincinnati Bell Tel	277,670	283,836	450,558	439,587	728,228	723,423	38.1%	39.2%
Contel of the South	82,210	74,587	116,071	99,539	198,281	174,126	41.5%	42.8%
GTE California	1,471,114	1,709,094	2,485,238	2,304,213	3,956,352	4,013,307	37.2%	42.6%
GTE Florida	893,217	975,588	1,128,464	1,059,805	2,021,681	2,035,393	44.2%	47.9%
GTE Hawaiian Tel	663,895	558,178	598,623	614,901	1,262,518	1,173,079	52.6%	47.6%
GTE Midwest	357,523	372,200	536,869	516,706	894,392	888,906	40.0%	41.9%
GTE North	1,765,181	1,760,855	2,404,499	2,427,789	4,169,680	4,188,644	42.3%	42.0%
GTE Northwest	735,743	774,115	992,283	1,039,233	1,728,026	1,813,348	42.6%	42.7%
GTE South	712,851	745,463	1,161,034	1,084,541	1,873,885	1,830,004	38.0%	40.7%
GTE Southwest	864,918	1,024,938	1,339,218	1,285,588	2,204,136	2,310,526	39.2%	44.4%
Illinois Bell	1,781,375	2,073,289	1,321,224	1,403,581	3,102,599	3,476,870	57.4%	59.6%
Indiana Bell	287,918	274,348	658,358	686,836	946,276	961,184	30.4%	28.5%
Michigan Bell	1,235,415	1,146,581	1,393,137	1,467,013	2,628,552	2,613,594	47.0%	43.9%
Nevada Bell	94,364	102,147	131,051	119,860	225,415	222,007	41.9%	46.0%
Ohio Bell	910,633	1,025,549	911,975	947,771	1,822,608	1,973,320	50.0%	52.0%
Pacific Bell	5,625,800	5,808,362	7,256,863	6,219,442	12,882,663	12,027,804	43.7%	48.3%
Southern NE Tel	742,097	663,296	1,276,103	1,256,780	2,018,200	1,920,076	36.8%	34.5%
Sprint Florida	575,805	479,076	925,798	926,133	1,501,603	1,405,209	38.3%	34.1%
Sprint Missouri	116,115	139,109	155,637	157,426	271,752	296,535	42.7%	46.9%
SW Bell Telephone	5,185,458	5,469,104	6,859,107	6,767,301	12,044,565	12,236,405	43.1%	44.7%
U S WEST Comm	6,049,931	5,367,346	7,849,900	7,852,592	13,899,831	13,219,938	43.5%	40.6%
United Tel Co Indiana	62,214	61,016	101,172	92,997	163,386	154,013	38.1%	39.6%
United Tel Co NJ	53,109	60,774	97,421	96,403	150,530	157,177	35.3%	38.7%
United Tel Co NW	58,806	61,891	79,532	89,608	138,338	151,499	42.5%	40.9%
United Tel Co Ohio	179,562	199,359	281,591	287,349	461,153	486,708	38.9%	41.0%
United Tel Co PA	116,170	116,311	186,731	189,122	302,901	305,433	38.4%	38.1%
United Tel Co SE	117,700	122,306	155,430	163,884	273,130	286,190	43.1%	42.7%
United Tel Co Texas	57,161	69,188	91,964	90,707	149,125	159,895	38.3%	43.3%
Western Reserve Tel	63,521	65,471	97,781	98,544	161,302	164,015	39.4%	39.9%
Wisconsin Bell	449,133	497,295	538,426	556,092	987,559	1,053,387	45.5%	47.2%
Totals	**52,701,020**	**53,370,784**	**71,390,271**	**69,106,917**	**124,091,291**	**122,477,701**	**42.5%**	**43.6%**

Data from 1996 and 1997 Statistics of Communications Common Carriers, FCC

U S WEST COMMUNICATIONS - Arizona
Capital Structure - August 1998

	$(000)	Cost	Percent of Capital
SHORT TERM DEBT			
Notes Payable	$56,021	5.68%	3.18%
Current Maturities	$44,368	6.64%	2.51%
Total Short Term Debt	$100,389	6.10%	5.69%
LONG TERM DEBT			
Funded and Other LT Debt	$615,321	7.76%	34.88%
Capital Leases	$11,901	7.30%	0.67%
Total Long Term Debt	$627,222	7.75%	35.55%
TOTAL DEBT	$727,611	7.52%	41.24%
COMMON EQUITY	$1,036,684		58.76%
TOTAL CAPITAL	$1,764,295		100.00%

DCF Model
U S WEST Communications

		Expected Dividends					Growth	Equity
	Price	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yield	Rate	Cost
	A	B	C	D	E	F	G	H = F+G
U S WEST	51.625	0.535	0.535	0.535	0.535	4.3%	6.0%	10.3%

Notes:

Expected dividends (current and future payments) are based upon historical increase patterns for each company

Dividend Yield is taken from the quarterly DCF calculation

$$\frac{D(1+K)^{.75} + D(1+K)^{.50} + D(1+K)^{.25} + D(1+K)^{0}}{\text{Price}}$$

10 day average closing price from Microsoft Investor Web Site (for the period 8/18/98 through 8/31/98)

Growth rate from Institutional Brokers Estimate System (IBES)

DCF Model
Telephone Companies

Company	Price A	Expected Dividends Qtr 1 B	Qtr 2 C	Qtr 3 D	Qtr 4 E	Yield F	Growth Rate G	Equity Cost H = F+G
Ameritech	47.763	0.300	0.300	0.327	0.327	2.7%	9.0%	11.7%
Bell Atlantic	43.575	0.416	0.416	0.416	0.416	4.0%	8.0%	12.0%
BellSouth	67.375	0.360	0.360	0.360	0.360	2.2%	9.0%	11.2%
SBC Communications	39.738	0.235	0.260	0.260	0.260	2.7%	10.5%	13.2%
GTE Corp	50.594	0.470	0.470	0.470	0.470	3.9%	9.5%	13.4%

Mean 12.3%

Truncated Mean (Eliminate the High and Low Estimates) *12.3%*

Notes:

Expected dividends (current and future payments) are based upon historical increase patterns for each company

Dividend Yield is taken from the quarterly DCF calculation

$$\frac{D(1+K)^{.75} + D(1+K)^{.50} + D(1+K)^{.25} + D(1+K)^{0}}{\text{Price}}$$

10-day average closing prices from Microsoft Investor Web Site (for the period 8/18/98 thru 8/31/98)

Growth rate from Institutional Brokers Estimate System (IBES)

DCF Model
Comparable Risk Companies

Company	Price	Expected Dividends Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yield	Growth Rate	Equity Cost
	A	B	C	D	E	F	G	H = F+G
Abbott Laboratories	42.488	0.150	0.150	0.168	0.168	1.6%	12.0%	13.6%
Albertsons	51.263	0.170	0.170	0.192	0.192	1.5%	12.8%	14.3%
Automated Data Proc.	68.969	0.133	0.152	0.152	0.152	0.9%	15.0%	15.9%
Brown-Foreman Cl B	63.894	0.280	0.308	0.308	0.308	2.0%	10.0%	12.0%
Consol. Edison NY	46.194	0.530	0.530	0.541	0.541	4.8%	2.0%	6.8%
Dow Jones & Co	53.156	0.240	0.240	0.240	0.240	1.9%	8.0%	9.9%
DPL Inc	17.600	0.235	0.235	0.244	0.244	5.6%	4.0%	9.6%
Emerson Electric	61.719	0.295	0.330	0.330	0.330	2.2%	12.0%	14.2%
FPL Group	63.994	0.500	0.500	0.528	0.528	3.3%	5.6%	8.9%
Gillette Co	46.050	0.128	0.128	0.128	0.149	1.2%	17.0%	18.2%
Illinois Tool Works	55.313	0.150	0.150	0.150	0.171	1.2%	13.8%	15.0%
IPALCO Enterprises	44.338	0.275	0.275	0.292	0.292	2.6%	6.0%	8.6%
Johnson & Johnson	75.032	0.250	0.250	0.250	0.284	1.5%	13.5%	15.0%
Leggett & Platt Inc	23.363	0.080	-	0.165	0.085	1.5%	15.0%	16.5%
McDonalds Corp	64.119	0.090	0.090	0.090	0.102	0.6%	13.0%	13.6%
Minnesota Mining & Mf	74.606	0.550	0.550	0.611	0.611	3.3%	11.0%	14.3%
Mobil Corp	71.844	0.570	0.570	0.616	0.616	3.4%	8.0%	11.4%
Nalco Chemical	31.232	0.250	0.250	0.250	0.250	3.4%	10.0%	13.4%
St. Paul Cos	33.481	0.250	0.250	0.275	0.275	3.3%	10.0%	13.3%
Washington Post Cl B	524.038	1.250	1.350	1.350	1.350	1.0%	8.0%	9.0%

Mean		12.7%
Truncated Mean	(Eliminate the High and Low Estimates)	12.7%

Notes: Expected dividends (current and future payments) are based upon historical increase patterns for each company

Dividend Yield is taken from the quarterly DCF calculation

$$\frac{D(1+K)^{.75} + D(1+K)^{.50} + D(1+K)^{.25} + D(1+K)^{0}}{\text{Price}}$$

10 day average closing price from Microsoft Investor Web Site (for the period 8/18/98 through 8/31/98)

Growth rate from Institutional Brokers Estimate System (IBES)

CAPM - Intermediate & Long Term Bonds
U S WEST Communications

	Risk Free Rate A	Average Beta B	Market Risk Premium C	Beta x MRP D = BxC	Equity Cost E = A+D	
U S WEST	5.18%	0.76	8.9%	6.8%	12.0%	Intermediate Term
	5.45%	0.76	8.6%	6.5%	12.0%	Long Term

Notes: The CAPM cost of equity estimate formula is:
K = Risk Free Rate + (Beta x Market Risk Premium)
Risk Free rate is the average of the 3-yr, 5-yr, and 10-yr
U.S. Treasury bond yields from the Federal Reserve
Statistical Release -- the H15 Report
(For the period 8/18/98 through 8/31/98)
Beta is average of Merrill Lynch and Value Line.

Market Risk Premium is an average of Ex-Post/Ex-Ante risk premiums.
EX-POST is the arithmetic mean risk premium for
Market Results 1926-1997 from Ibbotson Associates
(Stocks, Bonds, Bills & Inflation 1998 Yearbook)
EX-ANTE risk premium is the current S&P DCF equity
estimate minus the intermed. term Treasury bond yields

CAPM - Intermediate Term Bonds
Telephone Companies

Company	Risk Free Rate A	Average Beta B	Market Risk Premium C	Beta x MRP D = BxC	Equity Cost E = A+D
Ameritech	5.18%	0.93	8.9%	8.3%	13.5%
Bell Atlantic	5.18%	0.89	8.9%	7.9%	13.1%
BellSouth	5.18%	0.90	8.9%	8.0%	13.2%
SBC Communications	5.18%	0.85	8.9%	7.6%	12.8%
GTE Corp	5.18%	0.86	8.9%	7.7%	12.9%
Mean		0.89			**13.1%**
Truncated Mean (Eliminate the High and Low Estimates)					***13.1%***

Notes: The CAPM cost of equity estimate formula is:
K = Risk Free Rate + (Beta x Market Risk Premium)
Risk Free rate is the average of the 3-yr, 5-yr, and 10-yr U.S. Treasury bond yields from the Federal Reserve Statistical Release -- the H15 Report (For the period 8/18 through 8/31/98)
Beta is average of Merrill Lynch and Value Line.
Market Risk Premium is an average of Ex-Post/Ex-Ante risk premiums.
EX-POST is the arithmetic mean risk premium for Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)
EX-ANTE risk premium is the current S&P DCF equity estimate minus the intermed. term Treasury bond yields

CAPM - Long Term Bonds
Telephone Companies

Company	Risk Free Rate A	Average Beta B	Market Risk Premium C	Beta x MRP D = BxC	Equity Cost E = A+D
Ameritech	5.45%	0.93	8.6%	8.0%	13.5%
Bell Atlantic	5.45%	0.89	8.6%	7.7%	13.2%
BellSouth	5.45%	0.90	8.6%	7.7%	13.2%
SBC Communications	5.45%	0.85	8.6%	7.3%	12.8%
GTE Corp	5.45%	0.86	8.6%	7.4%	12.9%

Mean	**13.1%**
Truncated Mean (Eliminate the High and Low Estimates)	***13.1%***

Notes: The CAPM cost of equity estimate formula is:
K = Risk Free Rate + (Beta x Market Risk Premium)
Risk Free rate is the 30 year U.S. Treasury bond yield from the Federal Reserve Statistical Release -- the H15 Report (For the period 8/18 through 8/31/98)
Beta is average of Merrill Lynch and Value Line.
Market Risk Premium is an average of Ex-Post/Ex-Ante risk premiums.
EX-POST is the arithmetic mean risk premium for Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)
EX-ANTE risk premium is the current S&P DCF equity estimate minus the long term Treasury bond yield.

CAPM - Intermediate Term Bonds
Comparable Risk Companies

Company	Risk Free Rate A	Average Beta B	Market Risk Premium C	Beta x MRP D = BxC	Equity Cost E = A+D
Abbott Laboratories	5.18%	0.96	8.9%	8.5%	13.7%
Albertsons	5.18%	0.73	8.9%	6.5%	11.7%
Automated Data Proc.	5.18%	0.84	8.9%	7.5%	12.7%
Brown-Foreman Cl B	5.18%	0.76	8.9%	6.8%	12.0%
Consol. Edison NY	5.18%	0.75	8.9%	6.7%	11.9%
Dow Jones & Co	5.18%	0.88	8.9%	7.8%	13.0%
DPL Inc	5.18%	0.66	8.9%	5.9%	11.1%
Emerson Electric	5.18%	1.09	8.9%	9.7%	14.9%
FPL Group	5.18%	0.66	8.9%	5.9%	11.1%
Gillette Co	5.18%	1.00	8.9%	8.9%	14.1%
Illinois Tool Works	5.18%	1.10	8.9%	9.8%	15.0%
IPALCO Enterprises	5.18%	0.60	8.9%	5.3%	10.5%
Johnson & Johnson	5.18%	1.10	8.9%	9.8%	15.0%
Leggett & Platt Inc	5.18%	0.97	8.9%	8.6%	13.8%
McDonalds Corp	5.18%	0.93	8.9%	8.3%	13.5%
Minnesota Mining & M	5.18%	0.85	8.9%	7.6%	12.8%
Mobil Corp	5.18%	0.75	8.9%	6.7%	11.9%
Nalco Chemical	5.18%	0.80	8.9%	7.1%	12.3%
St. Paul Cos	5.18%	0.87	8.9%	7.7%	12.9%
Washington Post Cl B	5.18%	0.79	8.9%	7.0%	12.2%
	Mean				12.8%
	Truncated Mean				12.8%
	(Eliminate the High and Low Estimates)				

Notes: The CAPM cost of equity estimate formula is:

K = Risk Free Rate + (Beta x Market Risk Premium)

Risk Free rate is the average of the 3-yr, 5-yr, and 10-yr U.S. Treasury bond yields from the Federal Reserve Statistical Release -- the H15 Report (For the period 8/18 through 8/31/98)

Beta is average of Merrill Lynch and Value Line.

Market Risk Premium is an average of Ex-Post/Ex-Ante risk premiums.

EX-POST is the arithmetic mean risk premium for Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)

EX-ANTE risk premium is the current S&P DCF equity estimate minus the intermed. term Treasury bond yields

CAPM - Long Term Bonds
Comparable Risk Companies

Company	Risk Free Rate A	Average Beta B	Market Risk Premium C	Beta x MRP D = BxC	Equity Cost E = A+D
Abbott Laboratories	5.45%	0.96	8.6%	8.3%	13.8%
Albertsons	5.45%	0.73	8.6%	6.3%	11.8%
Automated Data Proc.	5.45%	0.84	8.6%	7.2%	12.7%
Brown-Foreman Cl B	5.45%	0.76	8.6%	6.5%	12.0%
Consol. Edison NY	5.45%	0.75	8.6%	6.5%	12.0%
Dow Jones & Co	5.45%	0.88	8.6%	7.6%	13.1%
DPL Inc	5.45%	0.66	8.6%	5.7%	11.2%
Emerson Electric	5.45%	1.09	8.6%	9.4%	14.9%
FPL Group	5.45%	0.66	8.6%	5.7%	11.2%
Gillette Co	5.45%	1.00	8.6%	8.6%	14.1%
Illinois Tool Works	5.45%	1.10	8.6%	9.5%	15.0%
IPALCO Enterprises	5.45%	0.60	8.6%	5.2%	10.7%
Johnson & Johnson	5.45%	1.10	8.6%	9.5%	15.0%
Leggett & Platt Inc	5.45%	0.97	8.6%	8.3%	13.8%
McDonalds Corp	5.45%	0.93	8.6%	8.0%	13.5%
Minnesota Mining & M	5.45%	0.85	8.6%	7.3%	12.8%
Mobil Corp	5.45%	0.75	8.6%	6.5%	12.0%
Nalco Chemical	5.45%	0.80	8.6%	6.9%	12.4%
St. Paul Cos	5.45%	0.87	8.6%	7.5%	13.0%
Washington Post Cl B	5.45%	0.79	8.6%	6.8%	12.3%

Mean	**12.9%**
Truncated Mean	***12.9%***
(Eliminate the High and Low Estimates)	

Notes: The CAPM cost of equity estimate formula is:
K = Risk Free Rate + (Beta x Market Risk Premium)
Risk Free rate is the 30 year U.S. Treasury bond yield from the Federal Reserve Statistical Release -- the H15 Report (For the period 8/18 through 8/31/98)
Beta is average of Merrill Lynch and Value Line.
Market Risk Premium is an average of Ex-Post/Ex-Ante risk premiums.
EX-POST is the arithmetic mean risk premium for Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)
EX-ANTE risk premium is the current S&P DCF equity estimate minus the long term Treasury bond yield.

Arizona Corporation Commission
U S WEST Communications - PCC-10
Exhibits of Peter C. Cummings
Page 1 of 2 January 8, 1999

Stock Issues & Expenses
U S WEST Equity Financing 1984 - 1995
(Dollars in Millions)

1/1/84	(A) Stock Issued to Public*	(B) Stock Issuance Expenses	(C) Net Proceeds (A) - (B)	(D) Non-Public Financing#	(E) Total Financing (A) + (D)	(F) Paid in Capital (C) + (D)	(G) % Stock Issuance Expenses (B) / (E)
Balance	***2,786.7***	***112.7***	***2,674.0***	***1,842.4***	***4,629.1***	***4,516.4***	***2.4%***
1984	100.6	5.0	95.6	(110.2)	(9.6)	(14.6)	
1985				(89.6)	(89.6)	(89.6)	
1986				(17.7)	(17.7)	(17.7)	
1987				(223.3)	(223.3)	(223.3)	
1988				(156.2)	(156.2)	(156.2)	
1989				302.4	302.4	302.4	
1990	591.7	18.0	573.7	122.2	713.9	695.9	
1991				593.2	593.2	593.2	
1992				163.7	163.7	163.7	
1993	1,045.0	25.0	1,020.0	206.4	1,251.4	1,226.4	
1994	676.9	7.5	669.4	390.0	1,066.9	1,059.4	
1995				113.0	113.0	113.0	U S WEST, Inc.
				52.0	52.0	52.0	USW Comm Group
				7.0	7.0	7.0	USW Media Group
12/31/95 Balance	***5,200.9***	***168.2***	***5,032.7***	***3,195.3***	***8,396.2***	***8,228.0***	***2.0%***
	5,155.4	*166.7*	*4,988.7*	*3,167.3*	*8,322.7*	*8,156.0*	USW Comm Group
	45.5	*1.5*	*44.0*	*28.0*	*73.5*	*72.0*	USW Media Group
	61.9%			38.1%	100.0%	98.0%	

*As shown on Exhibit 10, Page 2, of the paid in capital transferred to USW on 1/1/84, 60.2% and 39.8% of the total financing was originally derived from Public and Non-Public sources, respectively.

Non-public financing includes stock issued without issuance expenses, (e.g. New Vector purchase authorized July 11, 1991, U S WEST issued $399 million of common stock) and U S WEST treasury stock issued and purchased.

Source: U S WEST Annual Reports, Prospectuses, SEC Form 10-K's, Proxy Statement and USW Treasury.

Stock Issues & Expenses
Bell System Equity Financing 1975 - 1983
(Dollars in Millions)

Year	(A) Stock Issued to Public	(B) Stock Issuance Expenses	(C) Net Proceeds (A) - (B)	(D) Non-Public Financing	(E) Total Financing (A) + (D)	(F) Paid in Capital (C) + (D)	(G) % Stock Issuance Expenses (B) / (E)
1975	931,211	40,112	891,099	1,369	932,580	892,468	4.3%
1976	1,061,470	41,957	1,019,513	408,104	1,469,574	1,427,617	2.9%
1977	1,240,893	45,605	1,195,288	1,264,084	2,504,977	2,459,372	1.8%
1978	669,547	33,477	636,070	664,929	1,334,476	1,300,999	2.5%
1979	863,946	43,197	820,749	978,039	1,841,985	1,798,788	2.3%
1980	824,894	41,245	783,649	1,207,225	2,032,119	1,990,874	2.0%
1981	2,274,225	91,522	2,182,703	1,830,671	4,104,896	4,013,374	2.2%
1982	3,080,943	110,272	2,970,671	1,508,581	4,589,524	4,479,252	2.4%
1983	3,062,165	118,904	2,943,261	1,392,866	4,455,031	4,336,127	2.7%
Total	14,009,294	566,291	13,443,003	9,255,868	23,265,162	22,698,871	
	60.2%			39.8%	100.0%	97.6%	***2.4%***

Note: On 1/1/84, $4,516.4 million of paid in capital was transferred from the Bell System to U S WEST. As shown in the above study, this amount represented 97.6% of the total equity raised before deducting expenses. The total amount of equity financing before deducting expenses can be calculated by dividing $4,516.4 million by 97.6%.

$$\frac{\$4,516.4}{97.6\%} = \$4,629.1$$

The stock issue expenses can be calculated by subtracting the paid in capital (net equity) from the total equity financing.

$4,629.1 - $4,516.4 = $112.7

Source: Bell System and U S WEST Annual Reports, Prospectuses, U S WEST Treasury and Compustat Data Base.

Discounted Cash Flow Analysis
Standard & Poor's 500 Companies

S&P Compustat Data Base
August 31, 1998

S&P Company Name	Current Dividend A	Current Price B	Expected Dividend Yield C= (calc)	Expected IBES LT Growth D	Market Required Return (Div Yld+Growth) E = C + D
ABBOTT LABORATORIES	0.525	38.500	1.4%	12.0%	13.4%
ADOBE SYSTEMS INC	0.200	26.250	0.8%	15.0%	15.8%
AEROQUIP-VICKERS INC	0.800	40.313	2.1%	10.0%	12.1%
AETNA INC	0.800	60.188	1.4%	15.0%	16.4%
AHMANSON (H F) & CO	0.880	53.313	1.7%	12.0%	13.7%
AIR PRODUCTS & CHEMICALS INC	0.563	30.563	2.0%	12.0%	14.0%
ALBERTO-CULVER CO -CL B	0.195	20.000	1.0%	11.0%	12.0%
ALBERTSONS INC	0.630	50.563	1.3%	12.8%	14.1%
ALCAN ALUMINIUM LTD	0.600	19.000	3.3%	7.0%	10.3%
ALLEGHENY TELEDYNE INC	0.640	15.063	4.5%	11.0%	15.5%
ALLERGAN INC	0.520	47.250	1.2%	13.0%	14.2%
ALLIEDSIGNAL INC	0.520	34.313	1.6%	15.0%	16.6%
ALLSTATE CORP	0.360	37.500	1.0%	11.8%	12.8%
ALLTEL CORP	1.100	44.875	2.6%	11.0%	13.6%
ALUMINUM CO OF AMERICA	0.975	59.875	1.7%	8.5%	10.2%
AMERADA HESS CORP	0.600	49.125	1.3%	14.5%	15.8%
AMEREN CORP	2.540	39.563	6.5%	3.0%	9.5%
AMERICAN ELECTRIC POWER	2.400	45.250	5.4%	3.4%	8.8%
AMERICAN EXPRESS	0.900	78.000	1.2%	14.0%	15.2%
AMERICAN GENERAL CORP	1.400	64.250	2.3%	12.0%	14.3%
AMERICAN GREETINGS -CL A	0.700	36.625	2.0%	10.0%	12.0%
AMERICAN HOME PRODUCTS CORF	0.830	50.125	1.8%	13.0%	14.8%
AMERICAN INTERNATIONAL GROUF	0.189	77.313	0.3%	13.8%	14.1%
AMERICAN STORES CO	0.620	29.000	2.3%	11.0%	13.3%
AMERITECH CORP	1.130	47.125	2.5%	9.0%	11.5%
AMOCO CORP	1.400	45.313	3.2%	8.0%	11.2%
AMP INC	1.040	35.688	3.1%	11.6%	14.7%
ANADARKO PETROLEUM CORP	0.150	28.750	0.6%	20.5%	21.1%
ANHEUSER-BUSCH COS INC	1.000	46.750	2.2%	9.1%	11.3%
AON CORP	1.020	62.500	1.7%	12.0%	13.7%
APACHE CORP	0.280	22.875	1.3%	10.0%	11.3%
ARCHER-DANIELS-MIDLAND CO	0.180	15.000	1.3%	10.5%	11.8%
ARMSTRONG WORLD INDS INC	1.720	48.000	3.8%	10.0%	13.8%
ASARCO INC	0.800	15.938	5.2%	6.3%	11.5%
ASHLAND INC	1.100	45.563	2.5%	8.0%	10.5%
ASSOC FST CAPITAL CP -CL A	0.400	59.125	0.7%	17.3%	18.0%
AT&T CORP	1.320	50.125	2.8%	10.0%	12.8%
ATLANTIC RICHFIELD CO	2.825	58.000	5.0%	7.0%	12.0%
AUTODESK INC	0.240	23.375	1.1%	20.0%	21.1%
AUTOMATIC DATA PROCESSING	0.430	63.750	0.7%	15.0%	15.7%
AVERY DENNISON CORP	0.720	53.688	1.4%	14.0%	15.4%
AVON PRODUCTS	1.260	62.875	2.2%	15.5%	17.7%
BAKER-HUGHES INC	0.460	18.250	2.8%	19.0%	21.8%
BALL CORP	0.600	37.438	1.7%	9.0%	10.7%
BALTIMORE GAS & ELECTRIC	1.620	30.813	5.4%	4.0%	9.4%
BANC ONE CORP	1.345	38.063	3.8%	14.0%	17.8%

Discounted Cash Flow Analysis
Standard & Poor's 500 Companies

S&P Compustat Data Base
August 31, 1998

S&P Company Name	Current Dividend A	Current Price B	Expected Dividend Yield C= (calc)	Expected IBES LT Growth D	Market Required Return (Div Yld+Growth) E = C + D
BANK OF NEW YORK CO INC	0.490	24.500	2.1%	12.0%	14.1%
BANKAMERICA CORP	1.220	64.500	2.0%	13.0%	15.0%
BANKBOSTON CORP	0.985	35.688	2.9%	12.0%	14.9%
BANKERS TRUST CORP	4.000	74.313	5.7%	11.0%	16.7%
BARD (C.R.) INC	0.700	32.750	2.3%	12.0%	14.3%
BARRICK GOLD CORPORATION	0.160	13.000	1.3%	15.0%	16.3%
BATTLE MTN GOLD CO	0.050	3.062	1.7%	7.0%	8.7%
BAUSCH & LOMB INC	1.040	42.313	2.6%	13.0%	15.6%
BAXTER INTERNATIONAL INC	1.130	53.125	2.3%	13.0%	15.3%
BB&T CORP	0.580	28.000	2.2%	12.0%	14.2%
BEAR STEARNS COMPANIES INC	0.579	36.500	1.7%	12.0%	13.7%
BECTON DICKINSON & CO	0.260	33.313	0.8%	14.0%	14.8%
BELL ATLANTIC CORP	1.485	44.125	3.5%	8.0%	11.5%
BELLSOUTH CORP	1.440	68.563	2.2%	9.0%	11.2%
BEMIS CO	0.800	35.875	2.4%	13.8%	16.2%
BESTFOODS	0.840	50.000	1.8%	11.7%	13.5%
BIOMET INC	0.110	26.875	0.4%	15.0%	15.4%
BLACK & DECKER CORP	0.480	42.000	1.2%	15.0%	16.2%
BLOCK H & R INC	0.800	39.125	2.2%	15.0%	17.2%
BOEING CO	0.560	30.938	2.0%	15.5%	17.5%
BOISE CASCADE CORP	0.600	24.438	2.5%	7.5%	10.0%
BRIGGS & STRATTON	1.090	36.813	3.1%	9.0%	12.1%
BRISTOL MYERS SQUIBB	1.520	97.875	1.7%	13.0%	14.7%
BRLNGTN NTHRN SANTA FE	1.200	93.063	1.4%	12.0%	13.4%
BROWN-FORMAN -CL B	1.100	60.000	1.9%	10.0%	11.9%
BROWNING-FERRIS INDS	0.680	32.500	2.2%	12.0%	14.2%
BRUNSWICK CORP	0.500	14.938	3.5%	12.0%	15.5%
BURLINGTON RESOURCES INC	0.550	29.563	2.0%	11.5%	13.5%
CAMPBELL SOUP CO	0.557	50.375	1.2%	13.0%	14.2%
CAPITAL ONE FINL CORP	0.320	87.500	0.4%	19.5%	19.9%
CARDINAL HEALTH INC	0.090	87.500	0.1%	20.0%	20.1%
CAROLINA POWER & LIGHT	1.880	43.063	4.5%	5.0%	9.5%
CASE CORP	0.200	27.000	0.8%	10.0%	10.8%
CATERPILLAR INC	0.900	42.000	2.3%	10.0%	12.3%
CBS CORP	0.200	25.750	0.9%	22.5%	23.4%
CENTEX CORP	0.120	35.375	0.4%	13.5%	13.9%
CENTRAL & SOUTH WEST CORP	1.740	26.125	6.8%	3.0%	9.8%
CHAMPION INTERNATIONAL CORP	0.200	33.000	0.6%	7.0%	7.6%
CHASE MANHATTAN CORP	1.210	52.500	2.4%	12.0%	14.4%
CHEVRON CORP	2.280	74.063	3.2%	8.0%	11.2%
CHRYSLER CORP	1.600	45.250	3.6%	5.8%	9.4%
CHUBB CORP	1.140	62.500	1.9%	12.0%	13.9%
CIGNA CORP	1.097	58.188	2.0%	10.0%	12.0%
CINCINNATI FINANCIAL CORP	0.533	33.625	1.7%	9.0%	10.7%
CINCINNATI MILACRON INC	0.420	19.375	2.3%	12.0%	14.3%
CINERGY CORP	1.800	34.750	5.3%	5.0%	10.3%

Discounted Cash Flow Analysis
Standard & Poor's 500 Companies

S&P Compustat Data Base
August 31, 1998

S&P Company Name	Current Dividend A	Current Price B	Expected Dividend Yield C= (calc)	Expected IBES LT Growth D	Market Required Return (Div Yld+Growth) E = C + D
CIRCUIT CITY STR CRCT CTY GP	0.140	30.875	0.5%	17.0%	17.5%
CITICORP	2.100	108.312	2.1%	13.0%	15.1%
CLOROX CO/DE	1.160	96.438	1.3%	13.0%	14.3%
COASTAL CORP	0.200	26.188	0.8%	15.0%	15.8%
COCA-COLA CO	0.560	65.125	0.9%	17.0%	17.9%
COLGATE-PALMOLIVE CO	1.060	72.125	1.6%	14.0%	15.6%
COLUMBIA ENERGY GROUP	0.600	49.750	1.3%	10.0%	11.3%
COLUMBIA/HCA HLTHCR -VTG	0.080	22.563	0.4%	13.0%	13.4%
COMCAST CORP -CL A SPL	0.093	37.375	0.3%	12.0%	12.3%
COMERICA INC	1.120	52.250	2.3%	12.0%	14.3%
COMPUTER ASSOCIATES INTL INC	0.073	27.000	0.3%	17.0%	17.3%
CONAGRA INC	0.510	24.750	2.2%	13.0%	15.2%
CONSECO INC	0.219	27.625	0.9%	16.0%	16.9%
CONSOLIDATED EDISON INC	2.100	47.313	4.5%	2.0%	6.5%
CONSOLIDATED NATURAL GAS CO	1.940	43.813	4.6%	9.0%	13.6%
COOPER INDUSTRIES INC	1.320	42.563	3.3%	12.0%	15.3%
COOPER TIRE & RUBBER	0.350	16.000	2.3%	10.0%	12.3%
COORS (ADOLPH) -CL B	0.550	41.250	1.4%	9.5%	10.9%
CORNING INC	0.720	24.625	3.2%	18.0%	21.2%
COUNTRYWIDE CREDIT IND INC	0.320	37.438	0.9%	14.5%	15.4%
CRANE CO	0.500	40.250	1.3%	12.0%	13.3%
CROWN CORK & SEAL CO INC	1.000	32.750	3.3%	14.5%	17.8%
CSX CORP	1.080	37.500	3.0%	11.6%	14.6%
CUMMINS ENGINE	1.075	40.688	2.8%	10.0%	12.8%
CVS CORP	0.220	36.375	0.7%	18.0%	18.7%
CYPRUS AMAX MINERALS CO	0.800	9.188	9.2%	10.3%	19.5%
DANA CORP	1.040	39.188	2.8%	10.0%	12.8%
DARDEN RESTAURANTS INC	0.080	15.500	0.5%	11.0%	11.5%
DAYTON HUDSON CORP	0.330	36.750	1.0%	15.0%	16.0%
DEERE & CO	0.800	33.000	2.5%	10.2%	12.7%
DELTA AIR LINES INC	0.200	101.875	0.2%	9.0%	9.2%
DELUXE CORP	1.480	29.000	5.4%	10.0%	15.4%
DILLARDS INC -CL A	0.160	28.875	0.6%	11.0%	11.6%
DISNEY (WALT) COMPANY	0.162	27.438	0.6%	18.0%	18.6%
DOLLAR GENERAL	0.128	26.875	0.5%	24.5%	25.0%
DOMINION RESOURCES INC	2.580	41.688	6.3%	3.0%	9.3%
DONNELLEY (R R) & SONS CO	0.780	36.250	2.3%	12.0%	14.3%
DOVER CORP	0.360	27.250	1.4%	13.0%	14.4%
DOW CHEMICAL	3.240	78.000	4.3%	8.0%	12.3%
DOW JONES & CO INC	0.960	49.813	2.0%	8.0%	10.0%
DRESSER INDUSTRIES INC	0.700	25.563	2.9%	15.0%	17.9%
DTE ENERGY CO	2.060	42.125	5.0%	3.0%	8.0%
DU PONT (E I) DE NEMOURS	1.230	57.875	2.2%	10.0%	12.2%
DUKE ENERGY CORP	2.160	62.375	3.6%	7.1%	10.7%
DUN & BRADSTREET CORP	0.880	23.000	4.0%	8.8%	12.8%
EASTERN ENTERPRISES	1.600	39.563	4.1%	5.0%	9.1%

Discounted Cash Flow Analysis
Standard & Poor's 500 Companies

S&P Compustat Data Base
August 31, 1998

S&P Company Name	Current Dividend A	Current Price B	Expected Dividend Yield C= (calc)	Expected IBES LT Growth D	Market Required Return (Div Yld+Growth) E = C + D
EASTMAN CHEMICAL CO	1.760	51.563	3.6%	8.7%	12.3%
EASTMAN KODAK CO	1.720	78.125	2.3%	10.5%	12.8%
EATON CORP	1.720	58.563	3.1%	10.0%	13.1%
ECOLAB INC	0.320	27.813	1.2%	15.0%	16.2%
EDISON INTERNATIONAL	1.000	28.438	3.6%	7.0%	10.6%
EG&G INC	0.560	23.438	2.5%	9.0%	11.5%
ELECTRONIC DATA SYSTEMS CORF	0.600	33.313	1.9%	13.0%	14.9%
EMERSON ELECTRIC CO	1.080	57.000	2.0%	12.0%	14.0%
ENGELHARD CORP	0.380	18.375	2.2%	13.0%	15.2%
ENRON CORP	0.912	42.313	2.3%	15.0%	17.3%
ENTERGY CORP	1.800	28.813	6.3%	3.0%	9.3%
EQUIFAX INC	0.345	35.625	1.1%	17.1%	18.2%
EXXON CORP	1.625	65.438	2.6%	7.0%	9.6%
FANNIE MAE	0.840	56.625	1.6%	13.0%	14.6%
FIFTH THIRD BANCORP	0.551	53.188	1.1%	15.0%	16.1%
FIRST CHICAGO NBD CORP	1.600	63.375	2.7%	10.1%	12.8%
FIRST DATA CORP	0.080	20.688	0.4%	15.0%	15.4%
FIRST UNION CORP (N C)	1.220	48.125	2.7%	12.0%	14.7%
FIRSTENERGY CORP	1.500	28.875	5.3%	3.0%	8.3%
FLEET FINANCIAL GROUP INC	1.800	65.563	2.9%	11.5%	14.4%
FLEETWOOD ENTERPRISES	0.670	33.438	2.1%	14.0%	16.1%
FLUOR CORP	0.760	39.563	2.0%	12.0%	14.0%
FORD MOTOR CO	1.645	44.625	3.8%	7.0%	10.8%
FORT JAMES CORP	0.600	29.125	2.2%	12.0%	14.2%
FORTUNE BRANDS INC	1.410	27.563	5.4%	12.0%	17.4%
FOSTER WHEELER CORP	0.835	12.313	7.2%	12.3%	19.5%
FPL GROUP INC	1.920	66.563	3.0%	5.6%	8.6%
FRANKLIN RESOURCES INC	0.162	32.250	0.5%	17.0%	17.5%
FREEPRT MCMOR COP&GLD -CL B	0.900	11.625	8.5%	20.0%	28.5%
FRONTIER CORP	0.870	30.375	3.1%	14.0%	17.1%
GANNETT CO	0.730	59.000	1.3%	12.0%	13.3%
GAP INC	0.225	51.063	0.5%	18.0%	18.5%
GENERAL DYNAMICS CORP	0.820	47.563	1.8%	8.0%	9.8%
GENERAL ELECTRIC CO	1.040	80.000	1.4%	13.0%	14.4%
GENERAL MILLS INC	2.120	65.438	3.4%	10.0%	13.4%
GENERAL MOTORS CORP	2.000	58.125	3.6%	8.4%	12.0%
GENERAL RE CORP	2.200	207.500	1.1%	12.0%	13.1%
GENERAL SIGNAL CORP	1.020	36.750	2.9%	10.5%	13.4%
GENUINE PARTS CO	0.943	31.313	3.2%	9.7%	12.9%
GEORGIA-PACIFIC GROUP	2.000	42.875	4.9%	8.5%	13.4%
GILLETTE CO	0.412	41.125	1.1%	17.0%	18.1%
GOLDEN WEST FINANCIAL CORP	0.455	76.125	0.6%	11.5%	12.1%
GOODRICH (B F) CO	1.100	27.063	4.4%	15.0%	19.4%
GOODYEAR TIRE & RUBBER CO	1.140	49.000	2.4%	9.7%	12.1%
GPU INC	1.985	37.563	5.4%	3.0%	8.4%
GRACE (W R) & CO	0.560	12.875	4.7%	14.0%	18.7%

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GRAINGER (W W) INC	0.530	39.188	1.4%	12.0%	13.4%
GREAT ATLANTIC & PAC TEA CO	0.400	23.813	1.8%	9.5%	11.3%
GREAT LAKES CHEMICAL CORP	0.620	39.125	1.7%	10.0%	11.7%
GTE CORP	1.880	50.063	3.9%	9.5%	13.4%
GUIDANT CORP	0.050	61.750	0.1%	20.0%	20.1%
HALLIBURTON CO	0.500	26.563	2.1%	20.0%	22.1%
HARCOURT GENERAL INC	0.730	48.563	1.7%	20.0%	21.7%
HARNISCHFEGER INDUSTRIES INC	0.400	16.063	2.6%	10.0%	12.6%
HARRIS CORP	0.760	31.875	2.5%	12.0%	14.5%
HARTFORD FINL SVCS GRP INC	0.800	44.750	1.9%	12.0%	13.9%
HASBRO INC	0.307	31.313	1.1%	15.0%	16.1%
HBO & CO	0.025	21.250	0.1%	35.0%	35.1%
HEINZ (H J) CO	1.235	53.313	2.4%	10.4%	12.8%
HELMERICH & PAYNE	0.260	16.250	1.7%	16.5%	18.2%
HERCULES INC	1.000	25.563	4.1%	11.5%	15.6%
HERSHEY FOODS CORP	0.840	70.000	1.3%	12.0%	13.3%
HEWLETT-PACKARD CO	0.520	48.563	1.2%	15.0%	16.2%
HILTON HOTELS CORP	0.320	20.750	1.7%	19.0%	20.7%
HOME DEPOT INC	0.095	38.125	0.3%	24.0%	24.3%
HOMESTAKE MINING	0.150	8.875	1.8%	9.0%	10.8%
HONEYWELL INC	1.090	62.875	1.8%	13.0%	14.8%
HOUSEHOLD INTERNATIONAL INC	0.530	36.938	1.6%	17.0%	18.6%
HOUSTON INDUSTRIES INC	1.500	28.813	5.3%	4.0%	9.3%
HUNTINGTON BANCSHARES	0.677	22.750	3.1%	10.0%	13.1%
IKON OFFICE SOLUTIONS	0.260	5.312	5.3%	17.0%	22.3%
ILLINOIS TOOL WORKS	0.430	48.438	0.9%	13.8%	14.7%
IMS HEALTH INC	0.120	55.000	0.2%	21.0%	21.2%
INGERSOLL-RAND CO	0.573	39.750	1.5%	12.0%	13.5%
INTEL CORP	0.085	71.188	0.1%	20.0%	20.1%
INTERPUBLIC GROUP OF COS	0.503	57.000	0.9%	14.8%	15.7%
INTL BUSINESS MACHINES CORP	0.775	112.625	0.7%	11.8%	12.5%
INTL FLAVORS & FRAGRANCES	1.440	38.750	3.9%	11.0%	14.9%
INTL PAPER CO	1.000	37.000	2.8%	7.5%	10.3%
ITT INDUSTRIES INC	0.600	30.125	2.1%	10.5%	12.6%
JEFFERSON-PILOT CORP	1.040	56.625	1.9%	12.0%	13.9%
JOHNSON & JOHNSON	0.850	69.000	1.3%	13.5%	14.8%
JOHNSON CONTROLS INC	1.075	42.813	2.7%	13.5%	16.2%
JOSTENS INC	0.880	19.875	4.6%	10.0%	14.6%
KAUFMAN & BROAD HOME	0.300	21.375	1.5%	14.1%	15.6%
KELLOGG CO	0.870	30.500	3.0%	10.0%	13.0%
KERR-MCGEE CORP	1.760	38.500	4.8%	8.0%	12.8%
KEYCORP	0.840	25.500	3.5%	10.0%	13.5%
KIMBERLY-CLARK CORP	0.950	38.063	2.7%	13.0%	15.7%
KING WORLD PRODUCTIONS INC	1.000	21.000	5.0%	8.0%	13.0%
KNIGHT-RIDDER INC	0.800	47.625	1.8%	12.0%	13.8%
LAIDLAW INC	0.146	8.961	1.8%	17.5%	19.3%

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LEHMAN BROTHERS HOLDINGS INC	0.240	39.375	0.6%	10.5%	11.1%
LILLY (ELI) & CO	0.740	65.750	1.2%	16.0%	17.2%
LIMITED INC	0.480	21.000	2.4%	13.0%	15.4%
LINCOLN NATIONAL CORP	1.960	86.000	2.4%	11.0%	13.4%
LIZ CLAIBORNE INC	0.450	28.500	1.7%	15.0%	16.7%
LOCKHEED MARTIN CORP	1.600	87.563	1.9%	9.8%	11.7%
LONGS DRUG STORES INC	0.560	34.125	1.7%	9.0%	10.7%
LOUISIANA-PACIFIC CORP	0.560	18.750	3.1%	8.5%	11.6%
LOWES COS	0.110	35.063	0.3%	20.0%	20.3%
LUCENT TECHNOLOGIES INC	0.150	70.875	0.2%	20.0%	20.2%
MALLINCKRODT INC	0.650	22.875	3.0%	12.0%	15.0%
MANOR CARE INC	0.088	24.250	0.4%	15.0%	15.4%
MARRIOTT INTL INC	0.170	28.063	0.7%	18.0%	18.7%
MARSH & MCLENNAN COS	1.267	48.313	2.8%	12.0%	14.8%
MASCO CORP	0.405	23.000	1.9%	14.0%	15.9%
MATTEL INC	0.260	32.375	0.9%	15.0%	15.9%
MAY DEPARTMENT STORES CO	1.200	56.250	2.3%	11.0%	13.3%
MAYTAG CORP	0.640	43.125	1.6%	11.5%	13.1%
MBIA INC	0.765	56.125	1.5%	13.0%	14.5%
MBNA CORP	0.311	23.500	1.5%	22.1%	23.6%
MCDERMOTT INTL INC	0.200	20.063	1.1%	15.0%	16.1%
MCDONALDS CORP	0.322	56.375	0.6%	13.0%	13.6%
MCGRAW-HILL COMPANIES	1.440	76.250	2.0%	12.0%	14.0%
MCI COMMUNICATIONS	0.050	50.000	0.1%	10.0%	10.1%
MEAD CORP	0.610	27.375	2.3%	9.5%	11.8%
MEDTRONIC INC	0.220	51.375	0.5%	20.0%	20.5%
MELLON BANK CORP	1.290	52.000	2.6%	12.0%	14.6%
MERCANTILE BANCORPORATION	1.133	43.938	2.7%	9.0%	11.7%
MERCK & CO	1.690	115.937	1.6%	14.0%	15.6%
MEREDITH CORP	0.240	33.563	0.8%	15.0%	15.8%
MERRILL LYNCH & CO	0.750	66.000	1.2%	12.0%	13.2%
MGIC INVESTMENT CORP/WI	0.095	41.500	0.2%	15.0%	15.2%
MILLIPORE CORP	0.380	21.750	1.9%	16.5%	18.4%
MINNESOTA MINING & MFG CO	2.120	68.500	3.3%	11.0%	14.3%
MOBIL CORP	2.120	69.125	3.2%	8.0%	11.2%
MONSANTO CO	0.500	55.000	1.0%	20.0%	21.0%
MORGAN (J P) & CO	3.520	93.500	4.0%	10.0%	14.0%
MORGAN STANLY DEAN WITTER&C	0.522	58.063	1.0%	13.0%	14.0%
MORTON INTERNATIONAL INC	0.570	22.250	2.7%	12.0%	14.7%
MOTOROLA INC	0.480	42.938	1.2%	16.0%	17.2%
NALCO CHEMICAL CO	1.000	28.938	3.6%	10.0%	13.6%
NATIONAL CITY CORP	1.670	58.750	3.0%	11.0%	14.0%
NATIONAL SERVICE INDS INC	1.190	37.250	3.4%	11.5%	14.9%
NATIONSBANK CORP	1.370	57.500	2.5%	12.0%	14.5%
NEW YORK TIMES CO -CL A	0.320	29.000	1.2%	12.0%	13.2%
NEWELL COMPANIES	0.640	47.750	1.4%	15.0%	16.4%

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NEWMONT MINING CORP	0.390	13.688	3.0%	7.5%	10.5%
NICOR INC	1.380	38.813	3.7%	6.0%	9.7%
NIKE INC -CL B	0.440	34.688	1.4%	15.0%	16.4%
NORDSTROM INC	0.265	29.938	0.9%	14.0%	14.9%
NORFOLK SOUTHERN CORP	0.800	28.188	3.0%	10.9%	13.9%
NORTHERN STATES POWER/MN	1.395	26.500	5.4%	5.0%	10.4%
NORTHERN TELECOM LTD	0.290	47.500	0.7%	19.0%	19.7%
NORTHERN TRUST CORP	0.720	55.750	1.4%	12.0%	13.4%
NORTHROP GRUMMAN CORP	1.600	63.375	2.7%	10.0%	12.7%
NORWEST CORP	0.615	29.750	2.2%	13.0%	15.2%
NUCOR CORP	0.380	35.938	1.1%	15.0%	16.1%
OCCIDENTAL PETROLEUM CORP	1.000	18.500	5.6%	8.5%	14.1%
OMNICOM GROUP	0.425	47.625	1.0%	15.5%	16.5%
ONEOK INC	1.200	30.063	4.1%	6.0%	10.1%
OWENS CORNING	0.262	35.063	0.8%	13.0%	13.8%
PACCAR INC	1.325	41.000	3.4%	9.0%	12.4%
PACIFICORP	1.080	22.563	4.9%	4.0%	8.9%
PALL CORP	0.525	20.500	2.7%	14.5%	17.2%
PARKER-HANNIFIN CORP	0.507	29.000	1.8%	10.8%	12.6%
PECO ENERGY CO	1.800	34.250	5.3%	2.4%	7.7%
PENNEY (J C) CO	2.125	49.563	4.5%	10.0%	14.5%
PENNZOIL CO	1.000	35.750	3.0%	12.0%	15.0%
PEOPLES ENERGY CORP	1.860	33.125	5.7%	4.0%	9.7%
PEP BOYS-MANNY MOE & JACK	0.240	14.688	1.8%	15.0%	16.8%
PEPSICO INC	0.480	27.875	1.9%	15.0%	16.9%
PERKIN-ELMER CORP	0.680	57.875	1.3%	18.0%	19.3%
PFIZER INC	0.680	93.000	0.8%	19.5%	20.3%
PG&E CORP	1.200	32.125	3.8%	4.3%	8.1%
PHARMACIA & UPJOHN INC	1.080	41.688	2.7%	12.0%	14.7%
PHELPS DODGE CORP	2.000	44.750	4.6%	6.0%	10.6%
PHILIP MORRIS COS INC	1.600	41.563	4.1%	14.0%	18.1%
PHILLIPS PETROLEUM CO	1.340	40.813	3.4%	8.0%	11.4%
PIONEER HI-BRED INTERNATIONL	0.317	33.750	1.0%	15.0%	16.0%
PITNEY BOWES INC	0.800	49.625	1.7%	13.0%	14.7%
PLACER DOME INC	0.300	8.062	3.9%	9.0%	12.9%
PNC BANK CORP	1.500	43.000	3.7%	11.0%	14.7%
POLAROID CORP	0.600	28.125	2.3%	13.0%	15.3%
POTLATCH CORP	1.710	32.875	5.4%	8.0%	13.4%
PP&L RESOURCES INC	1.670	23.625	7.1%	2.0%	9.1%
PPG INDUSTRIES INC	1.330	51.000	2.7%	10.0%	12.7%
PRAXAIR INC	0.440	35.875	1.3%	15.0%	16.3%
PROCTER & GAMBLE CO	0.900	76.500	1.3%	13.0%	14.3%
PROGRESSIVE CORP-OHIO	0.240	97.438	0.3%	15.0%	15.3%
PROVIDENT COS INC	0.380	36.000	1.1%	15.0%	16.1%
PROVIDIAN FINANCIAL CORP	0.100	64.250	0.2%	22.0%	22.2%
PUBLIC SERVICE ENTRP	2.160	36.500	6.0%	2.0%	8.0%

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PULTE CORP	0.120	28.875	0.4%	12.0%	12.4%
QUAKER OATS CO	1.140	53.125	2.3%	11.0%	13.3%
RALSTON PURINA CO	0.400	26.313	1.6%	11.8%	13.4%
RAYCHEM CORP	0.240	29.000	0.9%	15.0%	15.9%
RAYTHEON CO -CL B	0.800	45.625	1.8%	10.0%	11.8%
REGIONS FINL CORP	0.775	34.625	2.4%	10.5%	12.9%
REPUBLIC NEW YORK CORP	0.880	41.250	2.2%	9.6%	11.8%
REYNOLDS METALS CO	1.400	48.063	3.0%	9.0%	12.0%
RITE AID CORP	0.407	36.188	1.2%	15.0%	16.2%
ROCKWELL INTL CORP	1.160	36.250	3.4%	11.0%	14.4%
ROHM & HAAS CO	1.900	86.313	2.3%	10.0%	12.3%
ROYAL DUTCH PET -NY REG	1.455	40.000	3.8%	8.0%	11.8%
RUBBERMAID INC	0.610	25.250	2.6%	13.0%	15.6%
RUSSELL CORP	0.530	31.625	1.8%	12.0%	13.8%
RYDER SYSTEM INC	0.600	23.563	2.7%	10.0%	12.7%
SAFECO CORP	1.220	40.625	3.2%	10.0%	13.2%
SARA LEE CORP	0.800	45.375	1.9%	13.8%	15.7%
SBC COMMUNICATIONS INC	0.886	38.063	2.4%	10.5%	12.9%
SCHERING-PLOUGH	0.736	86.000	0.9%	15.0%	15.9%
SCHLUMBERGER LTD	0.750	43.813	1.9%	20.0%	21.9%
SCHWAB (CHARLES) CORP	0.140	29.875	0.5%	20.0%	20.5%
SCIENTIFIC-ATLANTA INC	0.060	17.688	0.4%	20.0%	20.4%
SEAGRAM CO LTD	0.645	30.875	2.2%	12.5%	14.7%
SEARS ROEBUCK & CO	0.920	45.375	2.2%	13.0%	15.2%
SERVICE CORP INTERNATIONAL	0.285	33.875	0.9%	19.0%	19.9%
SHARED MEDICAL SYSTEMS CORP	0.840	53.375	1.7%	20.0%	21.7%
SHERWIN-WILLIAMS CO	0.402	23.875	1.8%	12.3%	14.1%
SIGMA-ALDRICH	0.250	27.750	1.0%	12.0%	13.0%
SLM HLDG CORP	0.517	35.875	1.5%	12.0%	13.5%
SNAP-ON INC	0.820	26.250	3.3%	12.0%	15.3%
SONAT INC	1.080	27.063	4.3%	14.0%	18.3%
SOUTHERN CO	1.300	28.125	4.7%	4.0%	8.7%
SOUTHWEST AIRLINES	0.020	17.813	0.1%	12.0%	12.1%
SPRINGS INDUSTRIES -CL A	1.320	33.063	4.2%	10.0%	14.2%
SPRINT CORP	1.005	67.063	1.6%	12.3%	13.9%
ST PAUL COS	0.925	30.750	3.2%	10.0%	13.2%
STANLEY WORKS	0.770	39.375	2.1%	12.0%	14.1%
STATE STREET CORP	0.420	52.063	0.9%	14.4%	15.3%
SUMMIT BANCORP	0.990	34.125	3.0%	10.0%	13.0%
SUN CO INC	1.000	33.063	3.2%	8.5%	11.7%
SUNAMERICA INC	0.267	61.938	0.5%	15.0%	15.5%
SUNTRUST BANKS INC	0.925	56.063	1.7%	11.0%	12.7%
SUPERVALU INC	0.510	20.313	2.6%	10.5%	13.1%
SYNOVUS FINANCIAL CP	0.229	18.188	1.3%	14.3%	15.6%
SYSCO CORP	0.280	20.188	1.5%	14.0%	15.5%
TANDY CORP	0.400	54.563	0.8%	15.0%	15.8%

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TEKTRONIX INC	0.460	15.500	3.2%	15.0%	18.2%
TEMPLE-INLAND INC	1.280	44.813	3.0%	8.0%	11.0%
TENNECO INC	1.200	31.688	4.0%	12.0%	16.0%
TEXACO INC	1.750	55.563	3.3%	9.8%	13.1%
TEXAS INSTRUMENTS INC	0.340	47.375	0.8%	20.4%	21.2%
TEXAS UTILITIES CO	2.100	42.500	5.1%	5.0%	10.1%
TEXTRON INC	0.970	62.750	1.6%	13.0%	14.6%
THOMAS & BETTS CORP	1.120	34.063	3.5%	13.0%	16.5%
TIME WARNER INC	0.360	80.375	0.5%	12.0%	12.5%
TIMES MIRROR COMPANY -SER A	0.550	57.500	1.0%	12.8%	13.8%
TIMKEN CO	0.660	18.250	3.8%	11.0%	14.8%
TJX COMPANIES INC	0.093	22.313	0.5%	17.0%	17.5%
TORCHMARK CORP	0.585	35.750	1.7%	13.0%	14.7%
TRANSAMERICA CORP	2.000	102.313	2.1%	11.0%	13.1%
TRAVELERS GROUP INC	0.400	44.375	1.0%	15.0%	16.0%
TRIBUNE CO	0.640	64.438	1.1%	13.0%	14.1%
TRW INC	1.240	42.875	3.0%	10.0%	13.0%
TUPPERWARE CORP	0.880	18.875	4.9%	11.5%	16.4%
TYCO INTERNATIONAL LTD	0.075	55.250	0.1%	20.0%	20.1%
U S BANCORP/DE	0.620	34.125	1.9%	13.0%	14.9%
U S SURGICAL CORP	0.160	39.938	0.4%	15.0%	15.4%
U S WEST INC	2.140	51.688	4.3%	6.0%	10.3%
UNICOM CORP	1.600	35.625	4.6%	4.5%	9.1%
UNION CAMP CORP	1.800	37.063	5.0%	7.0%	12.0%
UNION CARBIDE CORP	0.787	40.000	2.0%	8.0%	10.0%
UNION PACIFIC CORP	1.720	39.813	4.5%	10.0%	14.5%
UNION PACIFIC RESOURCES GRP	0.200	8.562	2.5%	13.8%	16.3%
UNITED HEALTHCARE CORP	0.030	36.125	0.1%	19.5%	19.6%
UNITED TECHNOLOGIES CORP	1.240	72.563	1.8%	14.0%	15.8%
UNOCAL CORP	0.800	31.313	2.7%	8.0%	10.7%
UNUM CORP	0.565	44.000	1.4%	13.5%	14.9%
UST INC	1.620	26.125	6.5%	8.5%	15.0%
USX-MARATHON GROUP	0.760	26.000	3.1%	12.0%	15.1%
USX-U S STEEL GROUP	1.000	20.938	5.0%	8.0%	13.0%
WACHOVIA CORP	1.680	73.313	2.4%	11.0%	13.4%
WAL-MART STORES	0.270	59.000	0.5%	14.0%	14.5%
WALGREEN CO	0.235	38.375	0.7%	15.0%	15.7%
WARNER-LAMBERT CO	0.507	65.250	0.9%	22.6%	23.5%
WASHINGTON MUTUAL INC	0.707	32.000	2.4%	15.0%	17.4%
WELLS FARGO & CO	5.200	281.875	2.0%	13.0%	15.0%
WENDY'S INTERNATIONAL INC	0.240	20.063	1.3%	15.0%	16.3%
WESTVACO CORP	0.880	21.250	4.3%	7.0%	11.3%
WEYERHAEUSER CO	1.600	37.563	4.4%	8.0%	12.4%
WHIRLPOOL CORP	1.360	50.375	2.8%	10.0%	12.8%
WILLAMETTE INDUSTRIES	0.640	24.625	2.7%	10.0%	12.7%
WILLIAMS COS INC	0.540	23.000	2.5%	17.0%	19.5%

Discounted Cash Flow Analysis
Standard & Poor's 500 Companies

S&P Compustat Data Base
August 31, 1998

S&P Company Name	Current Dividend A	Current Price B	Expected Dividend Yield C= (calc)	Expected IBES LT Growth D	Market Required Return (Div Yld+Growth) E = C + D
WINN-DIXIE STORES INC	1.015	37.250	2.9%	10.0%	12.9%
WORTHINGTON INDUSTRIES	0.480	13.000	4.0%	15.0%	19.0%
WRIGLEY (WM) JR CO	1.170	77.500	1.6%	12.4%	14.0%
XEROX CORP	1.250	87.813	1.5%	16.5%	18.0%
WEIGHTED AVERAGE REQUIRED RETURN			**1.9%**	**12.9%**	**14.8%**

Notes:
1. 82 companies were deleted from the sample. 74 do not pay dividends, 3 do not have IBES growth rate, and 5 do not have compustat data for current market value.
2. Expected dividend yield is estimated using annual dividend increased by one half the IBES growth rate (dividend yield = annual dividend x (1 + .5 x growth rate) / price).
3. The S&P 500 is a market weighted index and the market required returns for individual companies are weighted by market value.

Standard & Poor's 500 Companies
Capital Asset Pricing Model Analysis
(Expected Return on the Market Model)

The Expected Return on the Market (Rm) is equal to the risk free rate of interest (Rf) plus Beta times the Market Risk Premium (MRP). $R_m = R_f + (\text{Beta} \times \text{MRP})$

			Refer to Note
Risk Free Rate			
Intermediate Term (3, 5, and 10 Yr Treasury Note Yields)		5.18%	(1)
Long Term (30 Year Treasury Bond Yields)		5.45%	(1)
Market Risk Premium			
Intermediate Term - Avg of Ex Post and Ex Ante		8.9%	
Ex Post (Ibbotson Data)	8.2%		(2)
Ex Ante (S&P 500 DCF - Risk Free Rate)	9.6%		(3)
Long Term - Avg of Ex Post and Ex Ante		8.6%	
Ex Post (Ibbotson Data)	7.8%		(2)
Ex Ante (S&P 500 DCF - Risk Free Rate)	9.4%		(4)
Beta			
By definition, the Beta of the market portfolio is	1.0		

CAPM Expected Return on the Market

Intermediate Term	5.18%	+	1.0	(8.9%) =	14.1%
Long Term	5.45%	+	1.0	(8.6%) =	14.1%
Average					14.1%

Notes:

1. Federal Reserve Statistical Release (H15 Reports)
2. Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)
3. 14.80% (Exhibit PCC-11) - 5.18% = 9.6%
4. 14.80% (Exhibit PCC-11) - 5.45% = 9.4%

Equity Risk Premium Test

			Notes			
Ex-Post Equity Risk Premium			(1)			
1. Common Stock Total Returns				13.0%		
2. Corporate Bonds Total Returns				6.1%		
3. Ex-Post Equity Risk Premium	(Line 1 - Line 2)			**6.9%**		
Ex-Ante Equity Risk Premium						
4. DCF Estimate for the S&P 500 Index			(2)	14.8%		
5. Cost of Single A LT Debt			(3)	7.1%		
6. Ex-Ante Equity Risk Premium	(Line 4 - Line 5)			**7.7%**		
Cost of Single A LT Debt			(3)	7.1%		
Adjustment to Equity Risk Premiums for Risk/Beta						
7. Beta Range from CAPM Estimate			(4)	0.76	to	0.89
8. Ex-Post Equity Risk Premium		ERP	x	Beta	=	Adj-ERP
9. (Risk-adjusted)		6.9%	x	0.76	=	5.2%
10.		6.9%	x	0.89	=	6.1%
11. Ex-Ante Equity Risk Premium		ERP	x	Beta	=	Adj-ERP
12. (Risk-adjusted)		7.7%	x	0.76	=	5.9%
13.		7.7%	x	0.89	=	6.9%

Calculation of the Return Range for the Equity Risk Premium Test

		Cost of Single A LT Debt		Adjusted Risk Premium		
Equity Risk Premium Range	=		+			
14.		7.1%	+	6.9%	=	**14.0%**
15.		7.1%	+	5.2%	=	**12.3%**

Notes:

1. Market Results 1926-1997 from Ibbotson Associates (Stocks, Bonds, Bills & Inflation 1998 Yearbook)
2. Ex-Ante DCF Estimate from Exhibit PCC-11
3. Federal Reserve Statistical Release H.15 8/31/98
4. Beta Range from CAPM (Exhibits PCC-7, PCC-8, PCC-9)

US WEST	=	0.76
Telephone Cos Avg	=	0.89
Comparables Avg	=	0.85

WAYNE G. ALLCOTT

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. ____________

TESTIMONY OF

WAYNE G. ALLCOTT

U S WEST COMMUNICATIONS

JANUARY 8, 1999

TESTIMONY INDEX

EXECUTIVE SUMMARY

The purpose of my testimony is to describe how competition has changed the marketplace for telecommunications services in Arizona and to request that the Commission recognize that U S WEST's authorized revenues must increase by $225.9 million in order to allow the Company an opportunity to produce the level of earnings required in a competitive marketplace. I also request that U S WEST be allowed to recover $70.9 million of the $225.9 million revenue deficiency in increased rates for a variety of services.

Because of the increased competition U S WEST is facing in virtually all of its markets, I am also requesting the Commission to adopt a progressive regulatory plan that would permit the Company to package, bundle, promote, and price its services on the same basis as its competitors in specific geographic areas where competition can be demonstrated. In areas where the presence of competition has not yet been demonstrated, U S WEST would continue to be regulated as it is today. This kind of marketing freedom is crucial in order for U S WEST to have an opportunity to recover all or part of the difference between its $70.9 million rate design proposal in this case and the $225.9 million dollar increase it is requesting in its authorized revenues.

I am also requesting the Commission to deregulate U S WEST's high capacity data services. These high end services were among the first of the Company's services to feel the effects of competition because they are typically provided to the large businesses clustered in the central business corridors around which the new entrants have built their fiber networks. Since there are numerous other providers, U S WEST lacks any power to dominate this market and these services should therefore be considered non-essential.

Further, I am requesting the Commission to adopt the Company's rate design proposal to recover an additional $70.9 million in annual revenue. This proposal includes increases to a variety of services, including basic residence service, Directory Assistance, Premium Listings, Private Line, and other miscellaneous services. U S WEST's proposal for basic residence service is to increase the rate for a customer's first line by $2.50. The Company is also proposing decreases for a number of services, such as Zone Connection Charges and the basic installation charge associated with residence service. We are also proposing a restructure of our switched access rates to align them with changes adopted at the federal level.

Finally, I would respectfully request that the Commission review this rate application in an expeditious fashion and approve the rate of return, revenue increase, rate design, and marketing flexibility requested by U S WEST.

WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Wayne G. Allcott. I am the Arizona Vice President for U S WEST Communications (USWC). My business address is 3033 N. 3rd Street, Phoenix, Arizona 85012.

Q. BRIEFLY OUTLINE YOUR EDUCATION AND PROFESSIONAL BACKGROUND.

A. I graduated from the University of Iowa with a Bachelor of Business Administration Degree in Economics. I began my career with Northwestern Bell Telephone Company in the Cedar Rapids Marketing department in 1965. Since then I have held a number of varied assignments in the marketing, customer service, and public policy organizations throughout the U S WEST territory. I assumed my current position as Arizona Vice President on January 1, 1995.

Q. WHAT ARE YOUR PRESENT RESPONSIBILITIES?

A. As the Arizona Vice President, I am responsible for public policy in Arizona. I am also responsible for the effective management of resources which are required to meet the expanding telecommunications needs of our customers in Arizona.

In addition, I am responsible for ensuring that the Company has the financial resources to support the investment required to meet those customer needs and to work with the

Commission, RUCO, the legislature, and other policy makers to ensure that the Company earns a reasonable rate of return for its shareholders.

PURPOSE

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony has several purposes. First, I will briefly discuss the dramatic changes which have taken place in the telecommunications industry with respect to competition, both within Arizona and throughout the country. These changes are of major concern to the Company because, unlike every one of its competitors, U S WEST is still operating under traditional rate of return regulation in Arizona. Now that competition in the local exchange market is a reality for most of U S WEST's Arizona customers, changes must be made in how the Company is regulated. U S WEST must be given the freedom to set prices according to market realities. The Company, through the testimony of Barbara Wilcox and Dave Teitzel, is presenting a plan that would move U S WEST closer to achieving parity with the way our competitors are regulated. I urge the Commission to adopt this plan. Through the testimony of Karen Stewart, the Company is also requesting the Commission to acknowledge the fundamental changes that have taken place in the market over the past several years relative to data services and to deregulate these services for U S WEST in Arizona.

Second, I discuss the importance of earnings in a competitive environment. The level of earnings received by shareholders should be commensurate with the risks they are taking when they choose to invest in a given company. Earnings should also be set at a level that will attract the capital necessary to meet the growing needs of customers in Arizona. Given the rapid acceleration of competition in all of U S WEST's markets, there is a need to increase the return to the Company's investors above the current level, which was set at a time when U S WEST faced little competitive risk. I recommend that the Commission adopt a return on equity of 13.0% for U S WEST. Based on this required return, the Company is experiencing a revenue shortfall of $225.9 million. As discussed later in my testimony and in the testimony of George Redding, the $225.9 million additional revenue requirement is comprised of 2 components - $83.3 million in temporary increases, and $142.6 million in ongoing increases. I am requesting that the Commission enter a finding recognizing that $225.9 million for 3 years and $142.6 million thereafter is the amount of revenue increase needed to produce the appropriate rate of return.

Third, I discuss the importance of adopting the Company's proposed rate design and establishing maximum rates for services within a competitive zone. This will enable U S WEST to change some of its rates and price its services more in line with the realities of a competitive marketplace. U S WEST's proposed rate design will produce $70.9 million in additional earnings for the Company.

Each of these three requests is essential to create an environment that will permit U S WEST to compete with other providers of telecommunications service in Arizona. Establishing a healthy rate of return and approving the Company's request for additional revenues will allow U S WEST to continue to invest in the types of new services customers are seeking. Customers will also benefit through the pricing flexibility U S WEST is requesting in this filing because the Company will be better able to meet the prices being offered by its competitors.

COMPETITION IN THE ARIZONA TELECOMMUNICATIONS MARKET

Q. HAVE THERE BEEN ANY MAJOR REGULATORY OR POLICY CHANGES SINCE U S WEST'S LAST RATE CASE IN 1993 THAT HAVE IMPACTED THE COMPANY'S OPERATIONS IN ARIZONA?

A. There have been dramatic regulatory and policy changes that have affected the market for telecommunications service in Arizona during the last 5 years. These changes have occurred, in part, as a result of actions taken at both the state and federal level.

At the state level, the Commission adopted new rules allowing competition in June of 1995. As a direct result of those rules, other carriers were allowed into the intraLATA long distance market. There are now over 100 carriers who provide long distance service in competition with U S WEST in Arizona. The Commission also passed interconnection and unbundling rules in 1996 that paved the way for other carriers to compete with U S WEST for local exchange service in Arizona.

At the federal level, in February of 1996 Congress passed the Telecommunications Act of 1996 (Act), which has effectively ended U S WEST's monopoly on local service. Since that time the Commission has certified and approved interconnection agreements for 16 other carriers to provide local service in Arizona. In addition to these 16 companies, there are 49 companies who have applied for, but not yet been granted Certificates of Convenience and Necessity (CC&Ns) and 59 interconnection and resale agreements that have been approved or have been allowed to go into effect through the operation of law. Of the later 59 approved agreements, 15 are for wireless providers, who do not need CC&N approval from the Commission in order to offer service in Arizona.

Q. WHAT IS THE LEVEL OF COMPETITION IN ARIZONA TODAY?

A. U S WEST is experiencing varying degrees of competition in Arizona, depending on the particular market segment one is looking at. Toll service is more competitive than local service at this time. Obviously, there is currently more competition in the higher margin business segment than there is with residence service. However, even in the residential market, U S WEST is experiencing increasing competition - both in multi-unit developments as well as in the suburban single family neighborhoods - as evidenced by COX's recent announcement that it would be offering a comprehensive package of telephone and video services to customers in Chandler beginning in 1998 and to the rest of the valley in 1999. The widely quoted COX prices of $11.75 for a first line and $6.50 for a second line are only available to customers who also purchase cable service, but these prices are far enough below U S WEST's current prices to be attractive to COX's cable TV subscribers. Although AT&T and MCI have temporarily abandoned the residential market in order to pursue a strategy focused on businesses, Sprint has recently announced that it will enter the residential market by late 1999, which is approximately the same time frame that a decision would be due in this proceeding. (TR Daily, June 2, 1998).

The sheer size of the local exchange service market makes it an attractive target for a variety of competitors, whether they be facilities based carriers, resellers, competitive access providers, wireless carriers, or cable providers. Further, these companies enjoy distinct advantages that are not available to U S WEST in Arizona. They can not only pick and choose which segment of the market they want to target, but can even be selective as to which specific customers they want to serve. U S WEST, on the other hand, must provide service to any customer within its territory who requests it, regardless of the cost or profitability. Our competitors can also bundle and package services in any manner they choose and are not subjected to the lengthy regulatory approval process that U S WEST faces in order to bundle its services.

The size of the market also makes it possible for many companies to become niche players. Therefore, although there may not currently be a single company which is competing directly with U S WEST for all of the same market segments, there are a number of companies who see the opportunity to get a toe-hold by serving smaller geographic areas, or by targeting some other niche, such as large business customers. There are even competitive alternatives for residential customers with credit problems, as evidenced by televised advertisements for local service at rates as high as $49.95 per month.

It may take a while longer before a single company emerges that can duplicate the type of service U S WEST offers in every part of its territory. However, a competitive marketplace does not require the presence of one or more ubiquitous competitors. It is the overall level of competition across the entire spectrum of telecommunications service that is the important factor in deciding the issues that U S WEST is requesting the Commission to consider in this proceeding. As shown in my exhibit WGA-1, our 7 major competitors have placed over 10,000 miles of fiber in Arizona and have the capability to offer switched services, such as basic business and residence service, through state of the art digital switches. Together, these 7 companies are already providing significant competition to U S WEST and wouldn't be investing as they are if they didn't believe that Arizona was going to be a profitable market for them. In addition, there are numerous companies who are competing with U S WEST through resale.

Q. HASN'T U S WEST BEEN GIVEN THE OPPORTUNITY TO ENTER NEW MARKETS AS A "QUID PRO QUO" FOR LOSING ITS STATUS AS A MONOPOLY PROVIDER OF LOCAL EXCHANGE SERVICE?

A. There was no "quid pro quo" established when the Commission opened up the intraLATA and local exchange markets in Arizona at the state level. At the federal level, Section 271 of the Act established a process for allowing local exchange carriers, like U S WEST, to enter the market for interLATA services. However, what originally began as a simple 14 point check list approved by Congress has since evolved into literally hundreds of conditions that the FCC now says U S WEST and the other Regional Bell Operating Companies (RBOCs) must meet in order to enter the interLATA market. To date the FCC has turned down every request it has received for interLATA relief. Therefore, even though it is theoretically possible that U S WEST could eventually participate in new markets, the reality is that it will continue to see a serious erosion of its local service revenues long before it sees a dime of money as an interLATA toll carrier.

U S WEST supports free and open competition in the entire telecommunications marketplace, provided it is done under the proper conditions. If customers are to receive the maximum benefits of competition, and if U S WEST is going to have a chance to succeed, the Company must be allowed to earn a fair rate of return, have the ability to flexibly price its services, and compete on an equal regulatory footing with its competitors.

Q. ARE THERE OTHER CHANGES TAKING PLACE WITHIN THE INDUSTRY THAT WILL IMPACT THE NATURE OF COMPETITION IN U S WEST'S MARKETS, INCLUDING ARIZONA?

A. Yes. Strategic alliances are being formed among many key participants in the telecommunications and cable TV industries. AT&T recently completed a merger with TCG, one of the major competitive access providers in the country. AT&T has also agreed to a merger with TCI, the largest cable TV company in the country. MCI, MFS, and Brooks Fiber were recently acquired by WorldCom. Bell Atlantic and NYNEX have merged and are now proposing to acquire GTE. PacTel and Southwestern Bell have also merged and have their sights set on a merger with Ameritech. Some may assume that U S WEST has a size advantage over its competitors because it is the incumbent carrier in its region. However, as the above examples demonstrate, U S WEST's competitors are not small mom and pop operations. They are among the largest companies in the United States and dwarf U S WEST in size. For example, AT&T has over $58 billion in assets and $51 billion in annual revenue, compared with $18 billion in assets and $10 billion in revenues for U S WEST.

While much of the trend has been towards the creation of large companies with diverse operations, U S WEST has settled on a more conservative strategy. In June of 1998 the Company spun off MediaOne, its cable and entertainment arm, in order to better concentrate on serving customers throughout its 14 state region. It did this in recognition of the fact that it will face fierce competition from the companies mentioned earlier.

Q. DO YOU HAVE ANY CONCERNS ABOUT U S WEST'S ABILITY TO SUCCESSFULLY COMPETE IN ARIZONA?

A. Yes. The current regulatory environment in Arizona places U S WEST at a disadvantage in several ways. First, because U S WEST is still a regulated company, it must seek Commission approval before it can bundle services and price the way its competitors do. Second, the process is subject to delay for a variety of reasons, including lack of Staff resources to evaluate filings in a timely manner, or intervention by competitors seeking to throw up roadblocks. Third, U S WEST is required to adhere to a "one size fits all approach", i.e., because it must average its prices across all customers in the state, it can't readily compete by charging customers differently depending on cost or other considerations. This must change or the Company will face disastrous consequences.

U S WEST is requesting that the Commission establish a process for allowing it to have complete pricing flexibility within discreet geographic areas known as "competitive zones". Dave Teitzel and Barbara Wilcox describe the specific details of U S WEST's proposal in their direct filed testimony.

Q. WOULD YOU BRIEFLY SUMMARIZE U S WEST'S COMPETITIVE ZONE PROPOSAL?

A. Certainly. Under U S WEST's plan, specific wire centers would be designated as competitive zones once it was established that customers within the zone had access to a competitive alternative. U S WEST would be required to demonstrate this by showing that a carrier was marketing its services within a wire center through facilities based service, resale, or by way of unbundled elements. Zones would be designated as competitive for either residence customers, business customers, or both.

Once an area was designated as a competitive zone, U S WEST would have complete freedom to bundle and price services upon simple notice to the Commission, without the need for formal approval of the package. As is the case with the Commission's current rules for competitive services, U S WEST would establish a maximum price for each service within the zone and, with the exception of basic residence service, would also be required to price above the Total Service Long Run Incremental Cost (TSLRIC) of each service.

U S WEST is also proposing that all new services be classified as competitive immediately upon introduction. U S WEST has no monopoly for a new service at the time the service is introduced. We start out with no customers, no revenues, and no market share. The argument that a new service is essential and should not be classified as competitive until there are other companies willing to offer it simply does not make sense. One of the hallmarks of competition is that firms continually introduce new services or packages to retain and grow market share. To the extent that no other company offers a similar service, they may be incented to consider doing so if they want to compete with U S WEST. But U S WEST should not be restricted in its ability to bundle and price a new service just because no one else chooses to offer it. Further, as long as a service were covered by the Act, competitors would have the ability to resale the service and may also be able to provision it through the use of unbundled elements. Therefore, there is no need to delay the introduction of new services by subjecting the Company, the Commission and the Commission Staff to the administrative practices currently associated with the introduction of a new service. The existing process simply serves as a disincentive for U S WEST to do more packaging.

There are many other details to the competitive zone proposal that are described in the testimony of Mr. Teitzel and Ms. Wilcox. However, what it all boils down to is competition. When a customer has a choice of service providers, then it is no longer necessary for the Commission to require U S WEST to conform with outdated regulatory practices and intervals that hinder the Company's ability to compete.

Q. WHY DOESN'T U S WEST SIMPLY UTILIZE THE EXISTING RULES FOR DESIGNATING ITS SERVICES AS COMPETITIVE?

A. The existing rules are better suited for services, such as toll or directory assistance, which are usually competitive on a statewide basis. However, what we are seeing now is that competition is emerging in specific geographic areas within the state. It starts in one part of town and grows from there. The competition may be extremely fierce in specific neighborhoods, buildings, or shopping centers targeted by the CLECs, and non existent in other areas of the state. Further, most customers generally prefer to deal with a single provider for all of their services. Therefore, where we do encounter competition, it is usually for a comprehensive package of services which includes basic service, optional features, long distance calling packages, internet access, wireless service, and, in some cases, even cable TV programming.

The existing process requiring U S WEST to file on a service by service basis is not compatible with the environment we face today. For one thing, the process takes too long. Even though U S WEST has filed a mere handful of competitive petitions, it has had to wait for up to a year and a half to have the Commission rule on them. Without a more efficient process, like that being proposed in this case, it is conceivable that we would need to file dozens, if not hundreds, of petitions in order to be able to compete in specific geographic areas without waiting until a service was competitive on a statewide basis. U S WEST's proposal would constitute a much more efficient process for the Commission to ensure that the Company is treated in the same manner as its competitors.

DEREGULATION

Q. WOULD YOU PLEASE EXPLAIN BRIEFLY WHY U S WEST IS ASKING THE COMMISSION TO DEREGULATE ITS DATA SERVICES?

A. Data services, such as High Capacity DS1 and DS3 facilities, ATM Service, Frame Relay, Transparent LAN, and MEGABIT, are highly competitive and represent an increasing share of the market for telecommunication services. Much of U S WEST's data service no longer traverses the traditional public switched network. Instead, an entirely new and separate network has evolved which is based on more efficient technology and protocols.

Data services are generally provisioned over fiber optic facilities that are readily available from a variety of competitors throughout the state. Deregulation of these services will recognize that U S WEST no longer exercises market power over its customers. Karen Stewart provides specific details concerning the competition U S WEST encounters in the market for data services in her direct testimony.

EARNINGS

Q. WHAT IMPACT DO THE CHANGES TAKING PLACE IN THE INDUSTRY HAVE ON THE EARNINGS REQUIRED ON THE COMPANY'S INVESTMENT?

A. Because the telecommunications industry is becoming increasingly more competitive, U S WEST's earnings are more at risk than they were in the monopolistic era of the past. This higher level of risk requires a higher level of earnings for the Company's investors so that U S WEST can attract the capital necessary to stay competitive. Despite the high levels of growth in Arizona and the Company's best efforts to manage its costs, the test year adjusted level of earnings is still well below the 9.75% composite return which was authorized by the Commission in Decision No. 58927. In his direct testimony, Pete Cummings further discusses the reasons why the Company's current authorized level of earnings is inadequate in today's marketplace.

Q. WITH ALL OF THE GROWTH THAT HAS OCCURRED IN ARIZONA SINCE THE LAST RATE CASE, WHY HASN'T U S WEST BEEN ABLE TO INCREASE ITS LEVEL OF EARNINGS IN THE STATE?

A. While it is true that our revenues are up, it is also true that our expenses and investment have increased. Revenue is just one side of the equation. The high levels of growth we have experienced mean that more copper and fiber needs to be buried. In addition we need more switches, more installers, and more technicians. Further, how customers use their phones has changed. Customers want more lines, more features, and more convenience. U S WEST has greatly increased its investment in Arizona in order to keep up with the growth and satisfy these needs.

Another factor which explains why earnings have not increased with growth is that basic residential service, which accounts for a significant portion of our access line growth over the last 5 years, is still priced below cost. When you are already selling a service below cost, you're not going to make up the difference simply by selling more of the product.

Finally, since the introduction of equal access in 1996, U S WEST has lost a significant share of its intraLATA toll revenues. As recently as 1996 U S WEST had virtually 100 percent of this market. U S WEST's share of this market has decreased significantly since that time, as the proprietary figures contained in Dave Teitzel's testimony demonstrate.

Q. HOW MUCH DOES U S WEST INVEST IN ARIZONA ON AN ANNUAL BASIS?

A. At the time U S WEST filed its last rate case in 1993, it was investing approximately $250 million annually on a total state basis in Arizona. U S WEST's owners have invested approximately $1.5 billion in Arizona since 1993. U S WEST is the only carrier making that kind of investment in Arizona today and is the only carrier obligated to serve all of the customers in its territory, profitable or unprofitable, rural or urban. No other company has that obligation, nor have any volunteered to provide service throughout the state. These other companies can "pick and choose" which customers they will serve and which they will leave to U S WEST. Therefore, you can expect them to continue to target only the most profitable areas and to get even more selective by picking only the most profitable customers within an area. Since U S WEST is expected to continue to serve all customers in the state as the carrier of last resort, then it needs to continue to invest in this state and its earnings must improve in order to attract investors who are willing to supply the necessary capital.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION WITH RESPECT TO U S WEST'S EARNINGS IN ARIZONA?

A. In his direct testimony, Pete Cummings addresses the relevant factors that should be considered in setting a fair and reasonable rate of return on the Company's ratebase and recommends that U S WEST be granted a 13.0% return on equity. I would ask the Commission to adopt Mr. Cumming's recommendation.

RATE DESIGN PROPOSAL

Q. HOW WOULD YOU SUMMARIZE THE COMPANY'S RATE DESIGN PROPOSAL?

A. As discussed in Mr. Redding's testimony, U S WEST has a total revenue deficiency of $225.9 million. However, due to competitive concerns the Company is only seeking to recover $70.9 million, or less than one third, of the $225.9 million at this time. My exhibit WGA-2 summarizes the various rate proposals which are presented by Dave Teitzel and Barbara Wilcox for recovery of this revenue requirement. As can be seen from my exhibit, residence basic service accounts for $32.7 million of the new revenues. Other major changes we are proposing include increases of $18.3 million for Directory

Assistance, $7.7 million for Listings and $3.3 million for Custom Calling Features. We are also proposing a decrease of $5 million for Switched Access service.

Q. HOW WOULD U S WEST RECOVER THE PROPOSED INCREASE TO BASIC RESIDENCE SERVICE?

A. I am recommending that the monthly rate for basic residence service be increased by $2.50 for a customer's first line - which will result in a rate of $15.68 after the current directory imputation surcharge expires, which is expected to occur later this year. U S WEST is not proposing a change for additional lines at this time. This is a very minimal increase when you look at it from the standpoint of either the Company's $225.9 million revenue requirement in this case, or from the standpoint of the cost we incur to provide basic residence service. Even though in a traditional rate case U S WEST would normally be requesting a much higher increase on residence service, we have chosen to limit our request in this case to $2.50 because of concern for our residential customers and also because of competitive factors. We hope to recover the remaining revenue requirement through the marketing flexibility we are requesting from the Commission.

Q. WHAT FACTORS DID THE COMPANY CONSIDER IN DEVELOPING ITS RATE DESIGN PROPOSAL?

A. There were basically three factors which we considered in setting these rates; 1.) competition, 2.) cost of service, and 3.) the likelihood of recovering the actual revenues anticipated from a given rate change. I will briefly discuss each of these factors.

Competition

Q. HOW ARE COMPETITIVE FACTORS REFLECTED IN THE COMPANY'S RATE DESIGN PROPOSAL?

A. Competition is the primary driver for the Company's competitive zone proposal. U S WEST is requesting complete pricing flexibility for all services within a competitive zone in order to be on a level playing field with its competitors. In order to accomplish this we are proposing that maximum rates be established for all of the Company's services for use in pricing services within a competitive zone. The initial rates contained in U S WEST's rate design proposal capture only $70.9 million of the total $225.9 million dollar revenue requirement being requested in this case. Whether or not U S WEST is ever able to recover the remaining $155 million will be dependent upon the Company's ability to successfully bring new products and services to the market and by competing successfully within its competitive zones. That's why it is so crucial for the Commission to grant the pricing and marketing flexibility we are requesting.

Cost of Service

Q. HOW ARE THE COMPANY'S COSTS REFLECTED IN THE PRICING PROPOSALS?

A. The Commission's rules require U S WEST to price its service above TSLRIC cost, with the exception of basic residence service. However, even without any rules, it is critical in a competitive market that the prices for all services cover their costs. If rates do not cover the costs to provide a service, then the company either loses money, or must recoup the cost in prices charged for its other products and services. In a competitive market, the company's ability to charge a rate higher than its cost is restricted because doing so would result in the loss of market share as customers shifted to other providers of the service. That leaves the company with only two alternatives, either to raise the price of the below cost service, or to continue to sell the service below its cost. The later choice would not be a viable long term alternative.

U S WEST is proposing increases to a number of services that are currently priced below cost, such as basic residential service and analog private line, and decreases to some of its services that are priced well above cost, such as toll and access. Since U S WEST will have pricing flexibility for each of its services within a competitive zone, the initial rates which are established in this proceeding will change over time in accordance with market conditions. To the extent that the proposed prices are still set too far above costs, they may have to be adjusted downwards within a competitive zone. To the extent that they are priced too low, they may increase - but only if the market will allow it.

Likelihood of Revenue Recovery

Q. WHAT DO YOU MEAN WHEN YOU SAY THAT YOU NEED TO CONSIDER THE LIKELIHOOD OF REVENUE RECOVERY WHEN RATES ARE SET?

A. If U S WEST's earnings are to improve as a result of this rate case, it is important that the revenue requirement be recovered from items with solid demand that will produce the desired revenues. If the Commission were to authorize an increase for U S WEST in this case, and then allocate all of the increase to services that are either highly competitive or which exhibit high price elasticity of demand, then U S WEST would not actually collect the revenues to which it is entitled. U S WEST has recommended a rate design proposal which recognizes these factors.

Q. CAN YOU GIVE SOME EXAMPLES OF THIS APPROACH TO PRICING?

A. Yes. For instance, even though we are experiencing competition for virtually all of our services at the current time, some are more competitive than others. Toll is more competitive on a statewide basis than basic exchange service and we have therefore requested reductions for our toll calling plans. Allocating a portion of the revenue requirement to toll service would not result in an increase in revenues for U S WEST, because customers would simply purchase this service from its competitors.

Likewise, within the local exchange category, business service is more competitive than residence service. We are therefore not proposing increases on business basic exchange service, since doing so would further jeopardize the recovery of our revenue requirement.

In some instances, such as Directory Assistance (DA), U S WEST is proposing increases even though it is experiencing a significant amount of competition in this market. However, the increase being proposed by U S WEST for DA service will still result in a rate that is $.10 less per call than the predominant rate being charged by its competitors. The Company's proposed increase on DA service helps reduce some of the pressure to further increase basic residential service and better positions the Company where it would like to be relative to its competition.

Q. WHAT IMPACT WILL YOUR RATE DESIGN PROPOSAL HAVE ON A TYPICAL RESIDENTIAL CUSTOMER?

A. The current average monthly residential bill in Arizona is $24.21. Since the existing basic line charge of $13.43 is only a little over half of what our customers typically spend for telephone service, our rate proposal will impact customers differently, depending on the mix of services they use. For instance, most customers also subscribe to a variety of features and many make varying amounts of long distance calls. Depending on what features a customer has and how they use their phone, some may experience increases while others may see a slight decrease.

By focusing on the amount of increase being proposed for one component of a customer's service, such as the basic line charge, it is easy to lose sight of the outstanding value customers are receiving from their U S WEST phone service. The current monthly rate for basic residential service is $13.43, or $.89 less than the $14.32 that customers paid for comparable service ten years ago. While most of the other goods and services that we all buy on a regular basis have increased in price during that period, basic telephone service in Arizona has actually decreased in price. According to the U.S. Department of Labor, the CPI for all goods and services increased nearly 37% during the same period. The rate of increase for U S WEST's service in Arizona over the last 10 years would still be only a quarter of the overall CPI index even with the $2.50 increase we are proposing.

Further, the basic monthly rate buys a lot more now than it did in 1988. Ten years ago the Phoenix Metropolitan Area was divided into zones and callers were billed additional charges to make calls to another zone. Today customers can call from Apache Junction to Buckeye and from Queen Creek to Black Canyon City without incurring a toll charge. Likewise, the Greater Tucson area has seen significant increases in its local calling area during that time with the addition of several surrounding exchanges. The elimination of calling zones, together with the expansion of EAS calling areas and the growth in access lines have combined to make it possible for customers in the Phoenix area to reach over 1.8 million lines today with a local call. Call clarity and connection speeds are vastly improved with the deployment of new digital switches. In addition, improved technology has given customers access to more features that simplify their lives.

Another major consideration in determining the value of phone service is to look at how customers use their phones. Usage patterns have increased dramatically as customers have found more uses for their telephone service, such as on-line banking and internet access. The kind of value that all these things represent is rivaled in few, if any, other industries.

SUMMARY

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. Yes. I respectfully ask the Commission to do the following:

1. Recognize that U S WEST is experiencing competition in the markets for all of its services and approve the Company's proposal to establish competitive zones. This will enable U S WEST to be a more viable competitor and will benefit customers because the Company will have greater flexibility to bundle and price services that will be attractive to them.
2. Approve U S WEST's request to have its data services deregulated. This will eliminate barriers that currently restrain the growth of new data services and which diminish U S WEST's incentive to expand these services into areas where they are not currently available.

3. Approve a return on equity of 13.0% for U S WEST in Arizona. U S WEST will require huge amounts of capital if it is going to keep up with the explosive growth in the state and continue to invest in the technologies and services that customers desire. This rate of return is necessary for U S WEST to attract the capital that will allow the Company to do these things as well as to fulfill its carrier of last resort obligations.

4. Approve a total revenue requirement increase for U S WEST of $225.9 million for three years and $142.6 million thereafter. Also, approve the Company's request to recover $70.9 million of that increase immediately through the changes we have proposed. Even though U S WEST is only requesting recovery of $70.9 million of its revenue deficiency in this case, recognition of the full $225.9 million deficiency is still appropriate because that is the amount supported by the testimony we are presenting in this proceeding.

5. Adopt U S WEST's rate design proposal. The Company's proposal was developed based on careful consideration of the realities of a competitive market. We have recommended increases for services that are either below cost, or where the market would allow it. Placing increases in other areas, such as Switched Access, Toll, or on Business rates would not only place the Company at a disadvantage in the competitive marketplace, but would result in U S WEST not receiving the additional revenues that are necessary in order to earn a fair rate of return in Arizona.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	))))))))))	DOCKET NO. ____________

EXHIBITS OF

WAYNE G. ALLCOTT

U S WEST COMMUNICATIONS

JANUARY 8, 1999

INDEX OF EXHIBITS

ARIZONA CLEC FACILITIES

CLEC	Miles of Fiber	Switching Capability
AT&T/TCG	300	Yes
Brooks Fiber	NA	Yes
COX	8,900	Yes
ELI	400	Yes
e.spire	120	Yes
GST Net	300	Yes
MCI WorldCom	95+	Yes
Total	10,115	7

RATE DESIGN SUMMARY

Witness	Rate Category	Proposed Revenue ($ Millions)
Dave Teitzel	Residence Basic Service	$32.7
	Business Basic Service	($0.4)
	Long Distance Service	($0.5)
	Market Expansion Line	$0.5
	Directory Assistance	$18.3
	Listings	$7.7
	Custom Calling Services	$3.3
	Screening Services	$6.3
Barbara Wilcox	Private Line	$6.3
	Switched Access	($5.0)
	PAL	$1.7
Total		$70.9

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF U S WEST COMMUNICATIONS, INC., A COLORADO CORPORATION, FOR A HEARING TO DETERMINE THE EARNINGS OF THE COMPANY, THE FAIR VALUE OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN	)	DOCKET NO. AFFIDAVIT OF WAYNE G. ALLCOTT
STATE OF ARIZONA	)	
COUNTY OF MARICOPA	)	
	) :)	SS

Wayne G. Allcott, of lawful age being first duly sworn, deposes and states:

1. My name is Wayne G. Allcott. I am the Arizona Vice President of U S WEST Communications in Phoenix, Arizona.

2. Attached hereto and made a part hereof for all purposes is my testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Wayne G. Allcott

Wayne G. Allcott

SUBSCRIBED AND SWORN to before me this 7th day of January, 1999.

Josie Maldonado

Notary Public

My Commission Expires:

OFFICIAL SEAL
Josie Maldonado
Notary Public-Arizona
Maricopa County
My Commission Expires: 9-21-00

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 1
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Accounting Adjustment

Remove Media Split Costs

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(823)
Net Operating Income	823
Rate Base	0
Revenue Requirement	(1,383)

When the U S WEST Communications and Media Group split occurred in June 1998, the associated costs were booked below the line. However, taxes were inadvertantly booked above the line. The entry was corrected in July of 1998. The above adjustment reflects the correcting entry to the test period.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 2
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Accounting Adjustment

Income Tax True-Up

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(2,093)
Net Operating Income	2,093
Rate Base	0
Revenue Requirement	(3,518)

In November of 1997, the tax accounts were adjusted to reflect the 1996 tax return true-up. This true-up relates to a prior period and should be removed from the test year.

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Removal of Merger Costs

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	(13)
Total Operating Income Taxes	11
Net Operating Income	2
Rate Base	0
Revenue Requirement	(3)

In Docket No.(E10-1051-89-311), the Arizona Corporation Commission disallowed costs associated with the merger of the three operating companies owned by U S WEST (Mountain States Telephone and Telegraph, Pacific Northwest Bell, Northwestern Bell). The merger was effective January 1, 1991 and the costs are still being amortized. This adjustment removes the amortization of merger costs from the test period.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 4
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Disallowance of Non-Employee Concession

Test Year Ending June 30, 1998

$(000)

Operating Revenues	1,855
Operating Expenses	21
Total Operating Income Taxes	730
Net Operating Income	1,104
Rate Base	0
Revenue Requirement	(1,856)

In Decisions 53849, 54843 & 58927, the Arizona Corporation Commission disallowed non-employee concessions for retired employees and other special interest groups (I.e.,clergy,etc.). This adjustment removes the non-employee concession from test year results.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 5
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Customer Deposits Adjustment

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	512
Total Operating Income Taxes	(53)
Net Operating Income	(459)
Rate Base	(2,184)
Revenue Requirement	377

In Decisions 53849 and 54843 (Docket Nos. E-1051 83-035 and E-1051-84-100) the Arizona Corporation Commission ordered U S WEST to reflect customer deposits as 100% intrastate and to bring the associated interest into regulated operating results. This adjustment reflects the order at end-of-period test year.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 6
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Test Year Ending June 30, 1998

Bellcore Adjustment

$(000)

Operating Revenues	0
Operating Expenses	(87)
Total Operating Income Taxes	34
Net Operating Income	53
Rate Base	0
Revenue Requirement	(89)

In Decision 58927 (Docket No. E-1051-93-183) the Arizona Corporation Commission ordered U S WEST to include the Bellcore investment in rate base and exclude the profit component of Bellcore charges from operating expense. This adjustment excludes the profit component from operating expense. The rate base component no longer applies with the sale of Bellcore in November of 1997.

U S WEST

Arizona Intrastate Operations
Commission Adjustment

Interest Synchronization

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	0
Total Operating Income Taxes	(2,118)
Net Operating Income	2,118
Rate Base	0
Revenue Requirement	(3,560)

In Decisions 54843, 53849, and 58927 (Docket Nos. E-1051-84-100, and E-1051-83-035 and E-1051-93-183), the Arizona Corporation Commission ordered synchronization of interest expense. This adjustment synchronizes interest expense to the adjusted rate base for the test year.

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

End of Period Annualization Adjustment

Test Year Ending June 30, 1998

$(000)

Operating Revenues	(14,997)
Operating Expenses	12,657
Total Operating Income Taxes	(11,010)
Net Operating Income	(16,644)
Rate Base	0
Revenue Requirement	27,975

In Decision 58927 (Docket No E-1051-93-183) the Arizona Corporation Commission ordered U S WEST to synchronize test year revenues and various expenses with the end-of-period rate base. This adjustment synchronizes the entire income statement with the end-of-period rate base.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 9
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

Test Year Ended June 30, 1998

Wage Increase

$(000)

Operating Revenues	0
Operating Expenses	11,676
Total Operating Income Taxes	(4,649)
Net Operating Income	(7,027)
Rate Base	0
Revenue Requirement	11,811

Effective August 15, 1998 U S WEST incurred additional salary and wage expenses for occupational employees. On March 1, 1999 U S WEST will incur additional salary and wage expenses for management employees. This adjustment reflects the salary and wage increases.

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

Depreciation

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	19,165
Total Operating Income Taxes	(7,631)
Net Operating Income	(11,534)
Rate Base	(11,534)
Revenue Requirement	17,304

This adjustment reflects the annual impact of the Company's proposed depreciation represcription.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 11
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

Pension Asset

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	(7,374)
Total Operating Income Taxes	2,936
Net Operating Income	4,438
Rate Base	64,057
Revenue Requirement	4,106

This adjustment reflects the incremental difference between the normal pension expense credit and the 3rd quarter 1998 and estimated 4th quarter 1998 credit per SFAS 87. It also reflects the incremental difference in the pension asset because of the expense credit booked. The adjustment also reflects the reduction to the pension asset and pension liability for a transfer from the pension fund to retiree healthcare claims in accordance with IRC Section 420.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 12
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Proforma Adjustment

OPEB Adjustment

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	19,922
Total Operating Income Taxes	(7,932)
Net Operating Income	(11,990)
Rate Base	985
Revenue Requirement	20,330

This adjustment states test year Post Retirement Benefits Other than Pensions at the level required by SFAS 106.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 13
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment

Depreciation Reserve Deficiency Amortization

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	86,210
Total Operating Income Taxes	(34,324)
Net Operating Income	(51,886)
Rate Base	(51,886)
Revenue Requirement	77,840

This adjustment reflects a 3 year reserve deficiency amortization.

Arizona Regulation R-14 Filing
Docket No.
Schedule C-2 Attachment 14
Date: January 8, 1999

U S WEST

Arizona Intrastate Operations
Three Year Revenue Requirement Adjustments

Test Year Ending June 30, 1998

Year 2000 Costs

$(000)

Operating Revenues	0
Operating Expenses	5,935
Total Operating Income Taxes	(2,363)
Net Operating Income	(3,572)
Rate Base	777
Revenue Requirement	6,144

The Company has incurred and expects to incur software costs and to install additional computer hardware to meet the requirements of the Year 2000. This adjustment amortizes those costs over a 3 year period.

U S WEST

Arizona Intrastate Operations
Three Year Revenue Requirement Adjustment

Gain from Bellcore Sale

Test Year Ending June 30, 1998

$(000)

Operating Revenues	0
Operating Expenses	(663)
Total Operating Income Taxes	264
Net Operating Income	399
Rate Base	0
Revenue Requirement	(671)

In Decision 60382 Docket No. (E-1051-97-139) the Arizona Corporation Commission approved U S WEST's sale of its share in Bellcore. The Commission also deferred ratemaking treatment to the next general rate case. Consistent with that order, U S WEST proposes that 50% of the intrastate gain on the sale be amortized to the ratepayers over three years. This adjustment accounts for that proposed treatment.

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule C-3, Page 1 of 1
Title: Computation of Gross Revenue Conversion Factor

Date: January 8, 1999

INCOME TO REVENUE MULTIPLIER

1	GROSS INTRASTATE REVENUE	100.00%
2	LESS: UNCOLLECTIBLE REVENUE	1.032%
3	TOTAL REVENUE (L1-L2)	98.9680%
4	LESS: TAXES ON LOCAL REVENUE SERVICE	0.1124%
5	TAXABLE INCOME (L3-L4)	98.8556%
6	LESS: EFFECTIVE STATE INCOME TAX (L5 x 7.41%)	7.3226%
7	LESS: EFFECTIVE FEDERAL INCOME TAX (L5 x 32.41%)	32.0365%
8	NET OPERATING EARNINGS (L5-L6-L7)	59.4964%
9	INCOME TO REVENUE MULTIPLIER (L1 / L8)	1.6808

Notes:

a. Based on Test Year results.
b. Includes Franchise and License taxes and Sales Taxes assumed.

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule D-1, Page 1 of 1
Title: Summary of Cost of Capital

Date: January 8, 1999

	Arizona Total State			
	A	B	C	D = B * C
	End of Test Year - June 30, 1998			
Arizona Invested Capital	Amount (a)	Percent	Cost Rate (b)	Composite Cost
1 Common Equity	1,042,160	58.61%	13.00%	7.619%
2 Long Term Debt	629,676	35.41%	7.74%	2.742%
3 Short Term Debt	106,417	5.98%	6.15%	0.368%
4 Total Debt (L.1+L.2)	736,093	41.39%	7.51%	3.110%
5 Total Capital (L.1+L.4)	1,778,253	100.00%		10.729%
6 Debt Ratio (L.4/L.5)	41.39%			
	End of Projected Year			
7 Common Equity	1,036,684	58.76%	13.00%	7.64%
8 Long Term Debt	627,222	35.55%	7.75%	2.76%
9 Short Term Debt	100,389	5.69%	6.10%	0.35%
10 Total Debt (L.8+L.9)	727,611	41.24%	7.52%	3.10%
11 Total Capital (L.7+L.10)	1,764,295	100.00%		10.74%
16 Debt Ratio (L.10/L.11)	41.24%			

Supporting Schedules:	Recap Schedule:
(a) D-2	A-3
(b) D-3	A-1

U S WEST COMMUNICATIONS, INC.
ARIZONA TOTAL STATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule D-2, Page 1 of 1
Title: Cost of Long-Term and Short-Term Debt

Date: January 8, 1999

	End of Test Year June 30, 1998		End of Projected Year	
	A	B	C	D
Description of Debt	Outstanding	Annual Interest *	Outstanding	Annual Interest *
Long-Term Debt:				
Funded & other L-T Debt	615,047	47,741	615,321	47,742
Capital Leases	14,629	1,024	11,901	869
Total L-T Debt	629,676	48,765	627,222	48,611
Cost Rate		7.74%		7.75%
Short-Term Debt:				
Notes Payable	21,649	1,337	56,021	3,180
Current Maturities	84,768	5,204	44,367	2,948
Total S-T Debt	106,417	6,541	100,389	6,128
Cost Rate		6.15%		6.10%
Total Debt	736,093	55,306	727,611	54,739
Cost Rate		7.51%		7.52%

* Including amortization of discount, premium expense

Recap Schedule:
D-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule D-3, Page 1 of 1
Title: Cost of Preferred Stock

Date: January 8, 1999

U S WEST Communications has no preferred stock outstanding and has no plans to issue any in 1998, 1999 or 2000.

Recap Schedule:
D-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule D-4, Page 1 of 1
Title: Cost of Common Equity

Date: January 8, 1999

The required return on equity is 13.00%, based upon current market data for the test year ended June 30, 1998.

The required return on equity is 13.00%, based upon current market data for the projected year.

Note: See Testimony of Peter Cummings.

Recap Schedule:
D-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-1, Page 1 of 1
Title: Comparative Balance Sheets

Date: January 8, 1999

	A End of Test Year At June 30, 1998	B End of Year At Dec. 31, 1997	C End of Year At Dec. 31, 1996
Assets			
1 Plant in Service	3,390,874	3,299,806	3,200,989
2 Less: Depreciation Reserve	1,623,672	1,527,038	1,413,663
3 Plant Under Construction	84,019	80,979	57,244
4 Plant Held for Future Use	0	0	0
5 Plant Acquisition Adjustment	1,192	944	(167)
6 Net Plant (L.1 thru 5)	1,852,413	1,854,690	1,844,402
7 Material & Supplies	16,275	20,621	8,088
8 Current Assets & Other Investments	283,352	249,890	247,104
9 Prepaid Expenses & Deferred Charges	59,919	59,657	59,356
10 Total Assets (L.6 thru 9)	2,211,959	2,184,858	2,158,950
Liabilities & Capital			
11 Funded Debt	441,571	445,480	483,555
12 Commercial Paper	14,881	5,684	65,365
13 Bank Loans	0	0	0
14 Short-term notes	0	0	0
15 Advances and Notes from Affiliates	8,630	8,308	5,756
16 Interim Debt	0	0	0
17 Other Debt	10,131	7,322	11,960
18 Total Debt (L.11 thru 17)	475,214	466,795	566,636
19 Common Stock	755,645	724,522	705,015
20 Premium on Common Stock	0	0	0
21 Retained Earnings	(26,423)	(12,498)	16,233
22 Dividends Accrued but not Paid	0	0	0
23 Investment Tax Credit ESOP	5	5	5
24 Total Equity Base (L.19 thru 23)	729,226	712,030	721,253
25 Unamortized Investment Tax Credit - Job Development (Accts 4320)	22,299	23,414	26,792
26 Unamortized Investment Tax Credit - Other (Acct 4330)	0	0	0
27 Land Development Agreement Deposits	21,629	21,800	(22,058)
28 Accumulated Deferred Income Taxes	324,604	335,560	350,084
29 Customer Deposits	6,200	5,750	4,756
30 Other Current & Accrued Liabilities	632,787	619,510	511,487
31 Total Liabilities & Capital (L.18+24+25 thru 30)	2,211,959	2,184,858	2,158,950

Supporting Schedule:
(a) E-5

Recap Schedule:
A-3

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-2, Page 1 of 1
Title: Comparative Income Statements

Date: January 8, 1999

Description	A Test Year Ending June 30, 1998 Actual	D 1997	E 1996
1 Local Service Revenues	880,744	841,975	777,225
2 Network Access Service Revenues	121,936	118,478	99,791
3 Long Distance Network Service Rev.	39,559	47,030	74,413
4 Miscellaneous	81,628	72,489	56,323
5 Total Oper. Rev. (L.1 thru L.4)	1,123,866	1,079,972	1,007,752
6 Maintenance	235,323	227,468	230,796
7 Engineering Expense	13,771	12,122	17,106
8 Network Operations	34,643	34,187	39,333
9 Network Administration	1,933	2,353	4,008
10 Access Expense	2,040	3,613	9,303
11 Other	2,079	582	1,438
12 Total Cost of Services & Product (L.6 thru L.11)	289,789	280,325	301,984
13 Customer Operations	193,252	191,314	178,920
14 Corporate Operations	170,108	161,651	143,025
15 Property & Other Taxes	54,687	64,441	53,874
16 Uncollectibles	11,377	14,178	13,023
17 Total Selling, General & Admin. (L.13 thru L.16)	429,424	431,584	388,843
18 Other Oper. Inc. & Expense	1,660	1,669	3,459
19 Depreciation Expense	244,809	246,581	236,178
20 Universal Service Fund	(1,573)	(3)	1
21 Link Up America	(10)	(10)	(5)
22 Total Operating Expense (L.12+L.17+L.18+L.19+L.20+L.21)	964,099	960,146	930,460
23 Income From Operations (L.5-22)	159,767	119,827	77,292
24 Federal Income Tax (c)	41,532	26,539	9,074
25 State and Local	7,616	5,491	1,460
26 Net Operating Income (L.23-24-25)	110,620	87,797	66,758
27 Nonoperating Income & Expense	6,390	(12,617)	(31,964)
28 Nonoperating Income Tax	(222)	5,451	12,949
29 Net Operating Earnings (L.26-27-28)	104,452	94,963	85,773
30 Interest Expense	40,791	43,419	46,726
31 Juris Diff & Nonreg Net Income	0	0	0
32 Extraordinary Items	0	0	(0)
33 Net Income (L.29-L.30-L.31-L.32)	63,661	51,544	39,048
34 Income for JDIC	1,900	1,773	1,621
35 Income for Equity	61,762	49,771	37,427
36 % Regulatory Return on End of Period Equity (L35 / Common Equity)	5.93%	4.87%	3.74%

Supporting Schedules:
(a) E-6
(c) E-8

Recap Schedules:
A-2
C-1

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-3, Page 1 of 1
Title: Comparative Statement of Cash Flov

Date: January 8, 1999

	A End of Test Year At June 30, 1998	B End of Year At Dec. 31, 1997	C End of Year At Dec. 31, 1996
OPERATING ACTIVITIES			
1. Net Operating Revenues	159,800	119,800	77,300
Adjustments to Net Operating Income:			
2. Depreciation & Amortization	244,800	246,600	236,200
3. Current Income Taxes	(70,200)	(66,200)	(24,800)
4. Cash provided by Operating Activities (L1.L3)	334,400	300,200	288,700
INVESTING ACTIVITIES			
5. Net Construction Expenditures	(349,500)	(334,700)	(296,900)
6. Cash(used for) investing activities (L4)	(349,500)	(334,700)	(296,900)
FINANCING ACTIVITIES			
7. Dividends Paid	(102,700)	(97,800)	(87,500)
8. Net Outside Financing	28,100	(43,800)	2,400
9. Interest	(40,800)	(43,400)	(46,700)
10. Net Cash Flow (L4+L6+L7+L8+L9)	(130,500)	(219,500)	(140,000)

Recap Schedules:
(a) A-5

U S WEST COMMUNICATIONS, INC.
TOTAL COMPANY OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-4, Page 1 of 1
Title: Statement of Change in Stockholders' Equity

Date: January 8, 1999

	TOTAL COMPANY	A Common Stock Shares	B Common Stock Amount	C Premium on Common Stock	D Retained Earnings	E=B+C+D Common Stockholders Equity
1	Balance, December 31, 1995	1	7,348,000		(3,602,000)	3,746,000
	12 Months Ended December 31, 1996					
2	Net Asset Transfers True-up					0
3	Net Income				1,267,000	1,267,000
4	Dividends Declared				(1,267,000)	(1,267,000)
5	Common Stock Issued (a)		329,000			329,000
6	Miscellaneous Debits & Credits (2)				(15,000)	(15,000)
7	Balance December 31, 1996	1	7,677,000	0	(3,617,000)	4,060,000
	12 Months Ended December 31, 1997					
8	Net Asset Transfers True-up					0
9	Net Income (Loss)				1,252,000	1,252,000
10	Dividends Declared				(1,252,000)	(1,252,000)
11	Common Stock Issued (1)		295,000			295,000
12	Miscellaneous Debits & Credits (3)		45,000			45,000
13	Balance December 31, 1997	1	8,017,000	0	(3,617,000)	4,400,000
	6 Months Ended June 30, 1998					
14	Net Asset Transfers True-up					0
15	Net Income				650,000	650,000
16	Dividends Declared				(650,000)	(650,000)
17	Common Stock Issued (1)		63,000			63,000
18	Miscellaneous Debits & Credits					0
19	Balance June 30, 1998	1	8,080,000	0	(3,617,000)	4,463,000
	Arizona Intrastate Common Stockholders' Equity (Based on allocated balance sheet amounts)					
20	Balance, December 31, 1996					721,253
21	Balance, December 31, 1997					712,030
22	Balance, June 30, 1998					729,226

Note: Amounts available only in millions. Expressed in thousands on this schedule for integration with other schedules.

(1) Equity infusions from U S WEST, Inc.
(2) During 1996, the Company absorbed an affiliated company
(3) During 1997, the Company transferred employees and the related assets & liabilities to an unregulated affiliated company.

Supporting Schedules:
None

Recap Schedules:
None

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-5, Page 1 of 1
Title: Detail of Utility Plant

Date: January 8, 1999

Description	A End of Test Year At June 30, 1998	B 1997 Net Additions & Transfers	C = A - B End of Prior Year Dec. 31, 1997
TOTAL STATE			
1 2111 Land	10,159	3	10,156
2 2112 Motor Vehicles	57,218	1,834	55,384
3 2113 Aircraft	26	0	26
4 Garage Work Equipment	1,306	0	1,306
5 2116 other work equipment	32,694	(1,323)	34,017
6 2121 Buildings	157,040	1,488	155,552
7 2122 Furniture	2,015	0	2,015
8 2123 Office Equipment	23,441	3	23,438
9 2124 General Purpose Comp	115,401	(3,238)	118,639
Central Office Equipment			
2211 Analog Electronic	193,465	258	193,207
2212 Digital Electonic	716,614	3,272	713,342
2215 Electro Mech Switch	0	0	0
2220 Operator Systems	8,620	218	8,402
2231 Radio Systems	38,518	(627)	39,145
2232 Circuit Equipment	1,057,820	51,457	1,006,364
10 Total COE	2,015,037	54,578	1,960,459
11 2311 Station Apparatus	3	0	3
12 2321 Customer Premise Wire	0	0	0
13 2341 Large PBX	0	0	0
14 2351 Public Tele Term. Equip	15,693	502	15,192
15 2362 Other Terminal Equip	46,909	2,726	44,183
16 2411 Poles	44,157	330	43,826
17 2421 Aerial Cable	160,037	3,979	156,058
18 2422 Underground Cable	413,817	9,180	404,638
19 2423 Buried Cable	1,142,081	28,114	1,113,967
20 2424 Submarine Cable	3	0	3
21 2426 Intrabldg Network Cable	39,959	534	39,425
22 2431 Aerial Wire	7,729	368	7,361
23 2441 Conduit Systems	289,227	5,243	283,985
24 2681 Capital Leases	54,014	(83)	54,097
25 2682 Leasehold Improvement	25,205	197	25,008
26 2690 Intangibles	980	607	373
27 2001 Total Plant in Service [(L.1 thru 27)-L.10]	4,654,150	105,040	4,549,110
INTRASTATE			
28 2001 Plant in Service	3,390,874	91,069	3,299,806
29 Depreciation Reserve	1,623,672	96,634	1,527,038
30 Net Plant in Service	1,767,202	(5,565)	1,772,767
31 2002 Plant Held for Future Use	0	0	0
32 2003 & 2004 Plant Under Const.	84,019	3,040	80,979
33 2005 Plant Acquisition	1,192	248	944
34 Total Net Plant (L.30 thru 33)	1,852,413	(2,278)	1,854,690

Supporting Schedules:
None

Recap Schedules:
E-1
A-4
B-4

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-6, Page 1 of 1
Title: Comparative Departmental Operating Income Statements

Date: January 8, 1999

	Description	A End of Test Year At 30-Jun-98	B End of Year At Dec 31 1997	C End of Year At Dec 31 1996
	BASIC LOCAL SERVICES REVENUE			
1	5001 Basic Area Revenue	668,170	631,255	571,565
2	5002 Optional Extended Area	0	0	1
3	5003 Cellular Mobile Services	0	0	0
4	5004 Other Mobile Services	(0)	0	2
5	5010 Public Telephone	(2,829)	6,248	29,349
6	5040 Local Private Line	(6)	(11)	(10)
7	5050 Customer Premises	0	0	0
8	5060 Other Local Exchange	215,408	204,482	176,318
9	5069 Settlements	0	0	0
10	TOTAL BASIC LOCAL SERVICES	880,744	841,975	777,225
	NETWORK ACCESS SERVICE REVENUE	0	0	0
11	5081 End User *	0	0	0
12	5082 Switched Access *	0	0	0
13	5083 Special Access *	0	0	0
14	5084 State Access	121,936	118,478	99,791
15	TOTAL NETWORK ACCESS SERVICE REVENUE	121,936	118,478	99,791
	LONG DISTANCE NETWORK			
16	5100 Long Distance Message	32,322	39,421	63,598
17	5110 Unidirectional Lng Distance	7,237	7,610	9,286
18	5120 Long Distance Pvt Network	0	(1)	(17)
19	5160 Other Long Distance	0	0	1,546
20	TOTAL LONG DISTANCE NETWORK	39,559	47,030	74,413
	MISCELLANEOUS REVENUE			
21	5230 Directory	18,102	17,680	16,154
22	5240 Rent	(30,971)	(35,293)	(32,392)
23	5250 Corporate Operations	4,152	2,247	2,403
24	5260 Miscellaneous	17,707	17,620	14,393
25	5280 Other Nonregulated	65,912	62,780	48,989
26	5270 Carrier Billing & Collection	6,725	7,455	6,775
27	TOTAL MISCELLANEOUS REVENUE	81,628	72,489	56,323
28	TOTAL REVENUE	1,123,866	1,079,972	1,007,752
29	TOTAL OPERATING EXPENSES & TAXES	1,013,247	992,175	940,994
30	NET OPERATING INCOME (L.28-L.29)	110,620	87,797	66,758

Supporting Schedules:
None

Recap Schedules:
E-2
* Interstate Accounts

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-7, Page 1 of 1
Title: Operating Statistics

Date: January 8, 1999

	A End of Test Year At 30-Jun-98	B End of Year At Dec. 31, 1997	C End of Year At Dec. 31, 1996
Access Lines	2,628,042	2,575,134	2,426,692
Revenue per Access Line (per month)	$ 28.06	$ 28.61	$ 28.90
Intrastate Intralata Toll Messages (000)	36,862	42,122	61,936
Net Plant in Service per Access Line	$ 704.86	$ 720.23	$ 760.05

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule E-8, Page 1 of 1
Title: Comparative Taxes Charged to Operations

Date: January 8, 1999

Description	End of Test Year at June 30, 1998	Year End at Dec. 31, 1997	Year End at Dec. 31, 1996
1 7210.1 Investment Credits Realized	122	122	198
2 7210.2 Amortization of Investment Credits	2,927	3,370	4,552
3 7220 FIT Current	61,584	48,244	13,765
4 7250.1 Federal Originating Timing Differences	(3,081)	(2,293)	31,202
5 7250.2 Federal Reversing Timing Differences	(14,166)	(16,164)	(31,539)
6 7250.71 FIT Allocation Adjustment	0	0	0
7 Total Federal Income Tax (-L1-L2+L3+L4+5+6)	41,532	26,539	9,074
8 7230 SIT & LIT	8,570	5,624	413
9 7250.3 &.5 St & Loc Originating Timing Diff	(823)	(647)	2,686
10 7250.4 St & Loc Reversing Timing Diff	(131)	513	(1,639)
11 7250.72 SIT Allocation Adjustment	0	0	0
12 Total State & Local Taxes (L8 thru 11)	7,616	5,491	1,460
13 7240.7 Federal Superfund Taxes	0	0	(9)
14 Total Operating Taxes (L7+L12+L13)	49,148	32,029	10,524

Supporting Schedule:
None

Recap Sechedule:
E-2

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E8

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1:34 PM

Cash and Cash Equivalents - Cash and cash equivalents include highly liquid investments with original maturities of three months or less that are readily convertible into cash and are not subject to significant risk from fluctuations in interest rates.

Inventories and Supplies - New and reusable materials of the Company are carried at average cost, except for significant individual items that are valued based on specific costs. Nonreusable material is carried at its estimated salvage value.

Property, Plant and Equipment - The investment in property, plant and equipment is carried at cost less accumulated depreciation. Additions, replacements and substantial betterments are capitalized.

Costs for normal repair and maintenance of property, plant and equipment are expensed as incurred.

The Company provides for depreciation of property, plant and equipment using various straight-line group methods and remaining useful (economic) lives authorized by regulatory commissions. When the depreciable property, plant and equipment of the Company is retired or sold, the original cost less the net salvage value is generally charged to accumulated depreciation.

Revenue Recognition - Local telephone service revenues are generally billed monthly in advance. These revenues are recognized when services are provided, generally the following month. Nonrecurring and usage sensitive revenues derived from installation, exchange access, and long-distance network services are billed and recognized monthly as services are provided.

Income Taxes - The provision for income taxes consists of an amount for taxes currently payable and an amount for tax consequences deferred to future periods. For financial statement purposes, investment tax credits are being amortized over the economic lives of the related property, plant and equipment in accordance with the deferred method of accounting for such credits.

Employee Benefits
Pension Plan - The company participates in a defined benefit pension plan sponsored by U S WEST Which covers substantially all management and occupational employees. Management benefits are based on a final pay formula while occupational benefits are based on a flat benefit formula. The projected unit credit method is used for the determination of pension cost for financial reporting purposes and the aggregate cost method for funding purposes. The Company's policy is to fund amounts required under the Employee Retirement Income Security Act of 1974 and no funding was required in 1997 or 1996.

Postretirement Benefits Other Than Pensions - The Company participates in plans sponsored by U S WEST which provide certain health care and life insurance benefits to retired employees. In conjunction with SFAS No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions," U S WEST immediately recognized the accumulated post retirement benefit obligation for current and future retirees. However the FCC and certain state jurisdictions permit amortization of the transition obligation over the average remaining service period of active employees for regulatory accounting purposes, with most jurisdictions requiring funding as a stipulation for rate recovery.

The Company uses the projected unit credit method for the determination of postretirement medical and life costs for financial reporting purposes. The amount funded by the Company is based on regulatory accounting requirements.

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule F-1, Page 1 of 1
Title: Projected Income Statements
Present and Proposed

Date: January 8, 1999

Description	A Test Year Ended 30-Jun-98 (a)	B Projected Year YTD 09/98 Annualized Present Rates (b)	C Proposed Rates (b)
1 Local Service Revenues	880,744	896,100	972,710
2 Network Access Service Revenues	121,936	120,156	114,434
3 Long Distance Network Service Rev.	39,559	37,953	37,953
4 Miscellaneous	81,628	90,847	90,847
5 Total Oper. Rev. (L.1 thru L.4)	1,123,866	1,145,056	1,215,943
6 Maintenance	235,323	235,703	241,121
7 Engineering Expense	13,771	11,125	11,553
8 Network Operations	34,643	41,479	46,574
9 Network Administration	1,933	1,885	1,991
10 Access Expense	2,040	3,641	3,641
11 Other	2,079	901	903
12 Total Cost of Services & Product (L.6 thru L.11)	289,789	294,734	305,783
13 Customer Operations	193,252	184,452	191,535
14 Corporate Operations	170,108	174,889	176,679
15 Property & Other Taxes	54,687	47,593	47,673
16 Uncollectibles	11,377	10,860	11,591
17 Tot Selling, General & Admin. (L.13 thru L.16)	429,424	417,794	427,478
18 Other Oper. Inc. & Expense	1,660	(22)	(22)
19 Depreciation Expense	244,809	243,657	349,032
20 Universal Service Fund	(1,573)	(2,949)	(2,949)
21 Link Up America	(10)	(11)	(11)
22 Total Operating Expense (L.12+L.17+L.18+L.19+L.20+L.21)	964,099	953,203	1,079,311
23 Income From Operations (L.5-22)	159,767	191,854	136,632
24 Federal Income Tax	41,532	49,029	31,136
25 State & Local Income Tax	7,616	10,864	6,774
26 Net Operating Income (L.23-24-25)	110,620	131,960	98,722
27 Nonoperating Income & Expense	6,390	23,363	23,363
28 Nonoperating Income Tax	(222)	(3,135)	(3,135)
29 Net Operating Earnings (L.26-27-28)	104,452	111,732	78,494
30 Interest Expense	40,791	40,071	40,071
31 Juris Diff & Nonreg Net Income	0	0	0
32 Extraordinary Items	0	0	0
33 Net Income (L.29-L.30-L.31+L.32)	63,661	71,661	38,422
34 Income for JDIC	1,900	2,043	1,675
35 Income for Equity	61,762	69,617	36,748
36 % Regulatory Return on End of Period Equity	5.93%	6.72%	3.54%

Supporting Schedules:
(a) E-2

Recap Schedules:
(b) A-2

U S WEST COMMUNICATIONS, INC.
ARIZONA INTRASTATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule F-2, Page 1 of 1
Title: Projected Statements of Cash Flow

Date: January 8, 1999

	A	B	C
	Test Year Ended 30-Jun-98	Projected Year YTD 09/98 Annualized Present	Proposed #
OPERATING ACTIVITIES			
1. Net Operating Revenues	159,800	191,900	136,600
Adjustments to Net Operating Income:			
2. Depreciation & Amortization	244,800	243,700	349,000
3. Current Income Taxes	(70,200)	(72,500)	(92,500)
4. Cash provided by Operating Activities (L1.L3)	334,400	363,100	393,100
INVESTING ACTIVITIES			
5. Net Construction Expenditures	(349,500)	(268,800)	(268,800)
6. Cash(used for) investing activities (L4)	(349,500)	(268,800)	(268,800)
FINANCING ACTIVITIES			
7. Dividends Paid	(102,700)	(116,400)	(116,400)
8. Net Outside Financing	28,100	44,500	44,500
9. Interest	(40,800)	(40,100)	(40,100)
10. Net Cash Flow (L4+L6+L7+L8+L9)	(130,500)	(17,700)	12,300

U S WEST COMMUNICATIONS, INC.
ARIZONA TOTAL STATE OPERATIONS
TEST YEAR ENDING JUNE 30, 1998
$(000)

Arizona Regulation R-14 Filing

Schedule F-3, Page 1 of 1
Title: Projected Construction Requirements

Date: January 8, 1999

	Description	A Test Year Ended 30-Jun-98	B Projected December 31, 1998
1	Land	58	0
2	Buildings	4,304	3,685
3	Outside Plant	125,188	125,777
4	PBX and Stations	6,410	18,853
5	Cental Office Equipment	309,943	179,244
6	General Office Equipment	10,785	16,861
7	Leasehold Improvements	24,675	23,828
8	Total Construction Expenditures (L.1 thru 7)	481,364	368,248

Supporting Schedule:
None

Recap Schedule:
(a) A-4

Title: Assumptions Used in Developing Projections

Date: January 8, 1999

Assumptions Used in Preparing Projections

Projections are based on YTD September 1998 Annualized.

Cost of Service Analysis

Schedule G is not applicable to telecommunications services.
See Cost filing Material included with the testimony of Jerry Thompson

Summary of Revenues by Customer Classification
Present and Proposed Rates

		Revenues in the Test Year		Proposed Change		
	Customer Classification	Present Rates (a)	Proposed Rates (b)	Straight Reprice Amount (c)	Demand Reprice Amount (d)	% (e)
1.	Exchange & Network Services	$758,903,865	$784,366,642	$25,462,777	$25,462,777	3.36%
2.	Competitive Services	$94,502,427	$138,549,845	$44,047,418	$44,047,418	46.61%
3.	Services Catalog	$26,582,768	$26,582,768	$0	$0	0.00%
4.	Private Line Transport Services	$37,324,432	$44,423,571	$7,099,139	$7,099,139	19.02%
5.	Access Services	$225,594,334	$219,871,808	($5,722,526)	($5,722,526)	-2.54%
6.	Advanced Communications Services	$2,536,087	$2,536,087	$0	$0	0.00%
7.	Special Assemby	$167,622	$167,622	$0	$0	0.00%
8.	Total Gross Revenues (Lines 1-7)	$1,145,611,537	$1,216,498,344	$70,886,808	$70,886,808 (f)	6.19%

Supporting Schedules:
(a - m) H-2

Recap Schedule:
(d - f) A-1

Analysis of Revenues by Detailed Class of Service
Present and Proposed Rates

	Class of Service	Revenues in the Test Year: Present Rates (a)	Revenues in the Test Year: Proposed Rates (b)	Proposed Change: Straight Reprice Amount (c)	Proposed Change: Demand Reprice Amount (d)	Proposed Change: % (e)
	EXCHANGE & NETWORK SERVICES					
1.	Section 1 & 2 Service Charges & Residence Nonrecurring Decrease	$54,387,312	$46,653,282	($7,734,030)	($7,734,030)	-14.22%
2.	Zone Connection Charges	$5,052,547	$0	($5,052,547)	($5,052,547)	-100.00%
	EXCHANGE SERVICES					
3.	Basic Exchange Services	$525,790,096	$570,919,978	$45,129,882	$45,129,882	8.58%
4.	Public Access Line Service (PAL)	$5,973,223	$6,181,243	$208,020	$208,020	3.48%
5.	Obsolete Public Access Line Service (PAL)	$211,124	$0	($211,124)	($211,124)	-100.00%
6.	Ancillary Services	$167,143,620	$159,095,434	($8,048,187)	($8,048,187)	-4.82%
7.	Obsolete Ancillary Services	$345,943	$1,516,705	$1,170,762	$1,170,762	338.43%
8.	**TOTAL EXCHANGE & NETWORK SERVICES** (f) (Lines 1 - 7)	$758,903,865	$784,366,642	$25,462,777	$25,462,777	3.36%
	COMPETITIVE SERVICES					
	MESSAGE TELECOMMUNICATIONS SERVICES (MTS)					
9.	Two-Point MTS & Operater Services	$32,519,868	$77,784,184	$45,264,317	$45,264,317	139.19%
10.	METROPAC, Volume Disc and OCPs	$8,792,667	$4,725,010	($4,067,658)	($4,067,658)	-46.26%
11.	WATS Service	$886,623	$886,623	$0	$0	0.00%
12.	Obsolete MTS	$485	$2,855,396	$2,854,911	$2,854,911	588884.28%
13.	Total MTS Services (Lines 9 - 12)	$42,199,643	$86,251,213	$44,051,570	$44,051,570	104.39%
14.	Centron/Centrex	$10,993,621	$10,993,621	$0	$0	0.00%

Analysis of Revenues by Detailed Class of Service
Present and Proposed Rates

	Class of Service	Revenues in the Test Year Present Rates (a)	Proposed Rates (b)	Proposed Change Straight Reprice Amount (c)	Demand Reprice Amount (d)	% (e)
15.	Wire Maintenance Services	$40,479,986	$40,479,986	$0	$0	0.00%
16.	Miscellaneous Competitive Services	$455,855	$451,703	($4,152)	($4,152)	-0.91%
17.	Obsolete Competitive Services	$373,323	$373,323	$0	$0	0.00%
18.	**TOTAL COMPETITIVE SERVICES** (g) (Lines 13 - 17)	$94,502,427	$138,549,845	$44,047,418	$44,047,418	46.61%
19.	**SERVICES CATALOG** (h)	$26,582,768	$26,582,768	$0	$0	0.00%
20.	**PRIVATE LINE SERVICES** (i)	$37,324,432	$44,423,571	$7,099,139	$7,099,139	19.02%
21.	**ACCESS SERVICES** (j)	$225,594,334	$219,871,808	($5,722,526)	($5,722,526)	-2.54%
22.	**ADVANCED COMMUNICATIONS** (k)	$2,536,087	$2,536,087	$0	$0	0.00%
23.	**SPECIAL ASSEMBLY** (l)	$167,622	$167,622	$0	$0	0.00%
24.	**TOTAL GROSS REVENUES** (m) (Lines 8, 18 - 23)	$1,145,611,537	$1,216,498,344	$70,886,808	$70,886,808	6.19%

Recap Schedule:
(f - m) H-1

CHANGES IN REPRESENTATIVE RATE SCHEDULES
BASIC EXCHANGE SERVICE SCHEDULE COMPARISON

Residence	Present Rate	Proposed Rate	Change	Percent Increase
1 Party Flat	$13.18	$15.68	$2.50	19.0%
2 Party Flat	$11.94	$14.44	$2.50	20.9%
4 Party Flat	$10.70	$13.20	$2.50	23.4%
8 Party Flat	$9.46	N/A	N/A	N/A
Low Usage	$8.50	$11.00	$2.50	29.4%
Business				
1 Party Flat	$32.78	$32.78	$0.00	0.0%
4 Party Flat	$24.98	$24.98	$0.00	0.0%
8 Party Flat	$23.18	$23.18	$0.00	0.0%

CHANGES IN REPRESENTATIVE RATE SCHEDULES
BASIC EXCHANGE SERVICE SCHEDULE COMPARISON

Exchanges					
Ash Fork	Coolidge	Globe	Munds Park	Safford	Wellton
Bisbee	Coronado	Green Valley	Nogales	Sedona	Wickenburg
Cameron	Cottonwood	Humboldt	Patagonia	Sierra Vista	Williams
Camp Verde	Douglas	Joseph City	Phoenix	Tombstone	Winslow
Casa Grande	Eloy	Marana	Pima	Tubac	Yarnell
Chino Valley	Flagstaff	Maricopa	Prescott	Tucson	Yuma
	Florence	Miami	Robles	Vail	

Typical Bill Analysis

NOT APPLICABLE

Bill Count

NOT APPLICABLE

Application
Continued
See
Barcode
0000022916
For part 2